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EDITORIAL—SOME HIGHLIGHTS

I. General Economic Scene

State

Fifth Plan: The completion of the examination of the Draft Fifth Plan projects by the Departmental working groups referred to in the last issue of the Bulletin (page 460) was followed by the study of the results by the State Planning Commission and presentation of the final draft for approval of the State cabinet. Now the Plan is being put into the format prescribed by the Union Planning Commission for discussion and negotiation with the latter. In the National section the prospects for the Fifth Plan will be further analysed (following that in the last issue of the Bulletin, pages 476 to 478). The strategy and policy for the Fifth Plan set forth by the State Planning Commission have been maintained and the sectoral allocations left unchanged. The Plan presented to the Union Planning Commission will be of the order of Rs. 1,300 crores for what is called the State sector as against the Rs. 1,100 crores ceiling indicated by the Union Planning Commission. It is as a result of the detailed review and discussion of the State Plan that any further reduction that will be necessary will be undertaken. While this method has the merit of ensuring that the State's Plan is not seriously eroded in financial terms, it has the disadvantages of subjecting the State Plan to a Central review even in areas like agriculture, forestry, minor irrigation, education, health and rural water supply where the Union authorities have no knowledge of local realities and so no real competence.

Perspective Plan: The State Planning Commission will be presenting to the Government the State's Perspective Plan by December 31, 1973. It will cover the ten year (Fifth and Sixth Plan) period 1974-1984 instead of the 12 year period 1972-1984 on which the Draft Perspective Plan Frame was based. The basis frame work of the Plan now under preparation deals with six variables: an estimate of the resources needed to achieve the targets; efficient allocation of investible resources among the seven sectors; a forecast of the input of each sector at the end of the Fifth and Sixth Plans; the employment potential of the development schemes, taking into account the unemployment position at the end of the Fourth and Fifth Plans; availability of State, Central and private resources and estimate of the gap between requirements and availability; the extent to which the proposed investment pattern will eradicate poverty. On this basis the Plan will indicate the pattern of development of the State economy, the structural changes that will be needed, the constraints to development that may arise in agriculture, power, transport, education, savings, etc. and the extent to which industrial sectoral development will promote all round growth. This requires a two fold projection of the variables referred to earlier: one projection which would be historical in the sense that the past trends will continue and the other an intentional projection based on induced changes in investment, sectoral growth rates, employment, and consumption. The two projections and further refinements

will represent alternative policies and policy measures between which the Government can choose in light of the resources, consumption needs and employment constraints indicated in each alternative. The sectoral targets and the estimated investment requirements of the different sectors in the chosen time path should not only be consistent with each other but also fit into the broad strategy of development for the economy as a whole. Thus the perspective plan will represent a balance between the demand for and supply of sectoral outputs, the optimum allocation of investment for the attainment of the targets, a balance between available and needed financial resources. Given the continuous changes in the institutional infrastructure, technology, etc. the perspective plan must be regarded as a frame subject to rolling review.

Power: The month of July saw the gradual lifting of the 75 per cent power cut in the State. The south west monsoon which weakened towards the end of June (see Vol. III pages 468 to 472) became active from July 3 and by the third week the storage in the State reservoirs reached 1,400 million units of power generation against a total capacity of 2,200 million units. And so on July 3 a first relaxation for the month was announced, granting additional quotas to selected HT consumers such as cement and textiles for use during the night, and reducing the power cut from 75 to 50 per cent to all other 900 HT industries. On July 6 a second relief was announced removing restrictions on street lighting which had been limited to 7-10 p.m. on shops and commercial establishments which within a 50 per cent cut could now stay open after 7-30 p.m., and on cinema houses which could function freely under a 25 per cent cut. Finally on July 11 the cut was entirely removed except for peak load restrictions and the freezing of maximum demand. As of that date the generation in the State was 1,000 MW, 600 MW being from hydel and 400 MW from thermal. There is a reserve of at least 100 MW of thermal power available to meet spurts in demand. The daily power demand at the end of July—that being met from the hydel and thermal power resources—was 23 million units. The effect of the lifting of the power cut on the State's industrial production has been immediately beneficial. All units have reorganised their production schedules and working shifts to return to their pre-power cut production. Textile mills which have a great deal of decline in output to make up (see pages 470 and 487 of the last issue), have organised night shifts to take advantage of the large night availability of power. Tyre and cement units have resumed full production. The use of stand-by generators has now stopped and all industrial units have now switched on to the grid. The high cost they have incurred in using stand-by and ad hoc generators and the serious loss suffered by small industries, however, are not recoverable—except in the case of textiles, cement, some engineering firms like India Pistons which worked at 20-30 per cent of capacity (see page 470 of the last issue). Further while the restrictions on the basis of averaged maximum demand are removed, the units which have added to their capacity will not be able to use their added production lines. The State is not completely out of the woods as yet on the power front. First it is not till the end of August that the full storage position of our hydel reservoirs will be known. As of the end of July it was a comfortable one but not complete. Second the thermal generation of Ennore and Basin Bridge depends on regular and continuous supply of coal and till that is guaranteed, thermal generation cannot be regarded as a normal continuous supply. Ad hoc rushing around for coal is no basis for regular thermal

generation. Third the transmission losses are not only high but also increasing. Some part of this is attributed to large scale pilferage. This can and must be corrected. Fourth power consumption in the State is increasing at the rate of 10 per cent per annum. Industrialisation is proceeding apace and its demands—both in terms of backlog compensation and increased capacity—are increasing. For this year 50,000 agricultural pumpsets are to be connected—all of which demand power during the peak hours. Hence the need to plan power generation and distribution, including the possibility of a small cut spread through the year is an imperative. Against these priorities; the decision of the Government to postpone the take-over of the Kumbakonam and Nagapatnam electricity supply corporations is sound. The June 30 meeting of the Southern States Zonal Council meeting in Hyderabad also addressed itself to the power situation in the Southern States, the aid given to the other States by Kerala and to a lesser extent Mysore, and the reduction in production particularly of cement, fertilisers and chemicals consequent on the power cut. Apart from words of praise from the Union Home Minister for the southern grid, no development in regional power planning for further cooperation was recorded at this meeting. The Southern Regional Electricity Board, however, is working out a system for (a) a rational tariff structure for the exchange of power between the 4 power sub-systems and (b) an advance programme of mutual power assistance for the entire region. Under this system there will be an agreement for the buying and selling of power between the States, avoiding the varying rates charged from the supplying States to the receiving States as was done this year. Second under the mutual power assistance programme, daily and even hourly exchanges are arranged on the basis of the reservoir levels and thermal capacities in each State. In July, for instance, Mysore had to continue a 10 per cent cut because the Linganamakki reservoir was a little lower at 1,772 feet compared to that in July of last year and Kerala has faced disruption because of the strike among its Electricity Board workers. Under these conditions, the Tamil Nadu system could supply the Mysore system with power during the night which would also relieve the night load problem referred to in the last issue (see page 468). Within this regional cooperative frame, it should be possible to develop common power projects as between Tamil Nadu and Andhra Pradesh (Godavari) as well as between Tamil Nadu and Mysore (Hogenekkal) and Tamil Nadu and Kerala (the Pandiyar-Ponnampuzha). In fact the next stage would be to plan some parts of the Fifth Plan power projects as regional projects for the southern zone along lines of the inter-State power transmission line between Idikki in Kerala and Hootgali in Mysore now under construction. The link line runs 275 km in Kerala and 90 km in Mysore. The scheme costs Rs. 6.45 crores and is shared, Rs. 5.15 crores by Kerala and Rs. 1.3 crores by Mysore.

July saw a similar easing of the power cuts in all States in the Country with the exception of UP, where the failure of rains in the Rihand dam catchment area led to varying cuts on power consumers in the domestic, industrial and agricultural areas. Maharashtra also faced power disruption like Kerala, because of the tripping of the Nasik and Tarapur feeder lines. The States have also begun to assess their power performance during the year in a somewhat realistic manner, instead of throwing all the blame for the power cuts on the failure of monsoons, which was a fact and the delays in project approvals by the Union Government or the timely arrival of coal, which were also

facts. The Assam Enquiry Commission after a clear analysis of the power cuts and their consequences on the State's economy, examines the reasons for this record and concludes forthrightly that it was the result of "confusion, unsteady planning of the Board (which was erratic) and delay in completion of the projects by the State (and not only due to delays in Union Government approval)". There should have been more of this kind of self appraisal at the Seventh Conference of the State Ministers of Power held on July 2 and 3 in Kodaikanal. Instead the conference concerned itself once more with targets and plans. For the Fourth Plan, if the 17 projects now under way for generating 2 million KW are completed, the physical achievement for the Plan period will be 6 million KW against the target of 9 million KW. This will bring the total installed capacity to 18 million KW. in the Country. For the Fifth Plan the revised reduced target of creating an additional capacity of 18.28 million KW. with an investment of Rs. 5,700 crores as approved by Union Planning Commission was the basis of discussion and decision. Here again the precise means of attaining this target which is 3 times the Fourth Plan's performance (if the 17 projects are completed) were not discussed in terms of the kind of analysis of the Assam report. All that was reiterated was the usual plea for an uninterrupted flow of steel, cement, equipment and coal which of course are needed but which do not ensure project completion. Again grandiose plans for a water grid which would enable water to be diverted from a high catchment area to a low reservoir, the creation of a Central Electricity Authority and regional power generation boards which will build giant power projects were proposed by the Union Minister. These schemes and plans are good and some of them needed in the long run. The immediate problem is to plan power generation and distribution realistically and effectively. For the Country as a whole there is a proper balance between hydel and thermal generation. Of the 18 million KW. installed capacity, 6.8 million KW. or 38 per cent is hydel. In Tamil Nadu it is the other way about and it is urgent that clearance be now given and work be now started and/or completed rapidly on the second mine cut at Neyveli, the Tuticorin thermal plant and Kalpakkam. With reference to the ministerial committee's recommendation for the import of 3 million KW. thermal and 2.4 million KW. hydel generating equipment referred to in the last issue of the Bulletin (see page 491), BHEL Hyderabad is taking advance action on the design and development of 500 MW thermal sets. 60 MW. sets manufactured by the unit are no longer in demand as also 110 MW. sets. 200 MW sets are now in demand and Hardwar is moving into this line, with Tiruchi manufacturing 200 MW turbo set boilers and also planning 500 MW. boiler sets. Hyderabad, Bhopal and Hardwar are now working on the design and development of 500 MW. sets which will go into production midway in the Sixth Plan. This is the rationale for imports of sets during the Fifth Plan, provided the existing capacity of production of 110 MW. and 200 MW. sets are fully utilised. HEC must gear itself to supply BHEL with the quality castings it needs for producing the sets and avoiding their import. The other need is for State Electricity Boards to be fully staffed and their engineers trained in maintenance of this sophisticated equipment, whose breakdown has been one cause for the loss of power this year.

Another indirect action to ensure regular rain in the catchment areas is the artificial rain making and plans for satellite weather forecasting. The artificial rain making with ground based generators and common salt is taking place at Tiruvellore.

Simultaneously under the Monsoon programme, Indian and Russian scientists are studying the origin and structure of the monsoon with oceanographic research vessels observing sea and air current over India and East Asia. This will be followed by a satellite which will relay pictures of cloud covering every 20 minutes and so help more accurate production of the monsoon and its impact.

Rural Demand for Consumer Durables : In the demand function and food consumption survey summarised in the last issue (page 472), the conclusion of one of the surveys was stated to be that "the fall in demand (for consumer durables) in the urban agglomerations has forced the hire purchase companies and merchants to find new markets in the rural areas". A recent survey of the demand for consumer durables in rural Tamil Nadu reported by Economic Times throws further light on the details of the demand for consumer durables in the rural areas of the State. The two surveys are not really comparable because this second survey was completed as far as field investigations were concerned during March-April 1972, which was about a year before the power cut and which was the occasion for the first survey. This second survey was confined to rural house-holds with an annual income of Rs. 4,000 and over, divided into four groups (a) Rs. 4,000-6,000, (b) Rs. 6,001-8,000, (c) Rs. 8,001–12,000 and (d) above Rs. 12,000. The survey covered six districts (Coimbatore, Ramanathapuram, South Arcot, Dharmapuri, Salem and Madurai), seven blocks and twenty one villages. Group A covered 570 households, B 100, C 34 and D 40. Three tables provide a summary picture of the present and future demand for the consumer durables and brand awareness.

PRESENT USE OF DIFFERENT PRODUCTS

(% households)

Product	*INCOME GROUP* A	B	C	D	Overall
Bicycle ...	49.10	47.00	55.90	40.00	48.00
Radio Transistor ...	39.80	53.00	61.70	70.00	45.02
Alarm Clock ...	21.40	16.00	35.30	25.00	21.10
Scooter/Motor Cycle ...	3.00	5.00	8.80	15.00	4.20
Camera ...	2.30	3.00	5.90	10.00	3.00
Wall Clock ...	11.90	15.00	17.60	25.00	13.20
Table Fan ...	9.80	12.00	20.60	52.50	12.00
Ceiling Fan ...	7.00	12.00	11.70	30.00	9.10
Stove ...	7.70	14.00	14.70	27.50	10.20
Steel Cabinet ...	6.80	7.00	17.70	52.50	9.40
Sofa-cum-bed ...	3.50	4.00	14.70	25.00	4.90
Electric Iron ...	2.60	5.00	11.70	20.00	4.20
Sofa ...	1.00	1.00	2.90	20.00	2.30

PRESENT USE OF DIFFERENT PRODUCTS—*(continued)*

(% households)

Product		INCOME GROUP				
		A	B	C	D	Overall
Dining Table	...	0.70	3.00	5.90	25.00	2.50
Sewing Machine	...	2.60	—	—	10.00	2.40
Car	...	0.20	—	2.90	—	0.10
Record Player	...	0.50	3.00	2.90	10.00	1.50
Pedestal Fan	...	—	—	2.90	10.00	0.90
Electric Range/Oven	...	0.30	2.00	2.90	5.00	0 40
Foam Rubber Mattress	...	0.35	—	2.90	27.50	1.50
Pressure Cooker	...	0.40	—	5.90	5.00	1.50
Carpet	...	0.40	—	5.90	5.00	0.80
Refrigerator	...	—	—	—	15.00	0.80
Electric Hot Plate	...	0.40	1.00	—	10.00	0.40
Radiogram	...	—	—	—	7.50	0.40
Hot Water Geyser	...	0.20	—	—	2.50	0.16
Electric Grinder	...	0.30	—	—	2.50	0.40
Room Heater	...	—	—	—	2.50	0.10
Electric Kettle	...	—	1.00	—	—	0.10
Washing Machine	...	—	—	—	2.50	0.10
Toaster	...	—	—	2.90	0.50	0 40
Electric Coffee Percolator	...	—	—	2.90	—	0.10

INTENDED FUTURE PURCHASES

(% respondents)

Product		INCOME GROUP				
		A	B	C	D	Overall
Radio	...	30.4	35.0	24.0	17.5	30.1
Bicycle	...	23.5	24.0	12.0	20.0	22.6
Table Fan	...	9.1	6.0	27.0	—	9.1
Wall Clock	...	9.5	3.0	6.0	—	7.9
Motor Cycle/Scooter	...	6.5	11.0	—	12.5	7.1
Alarm Clock	...	8.6	2.0	3.0	—	7.0
Ceiling Fan	...	5.8	13.0	6.0	5.0	6.7
Steel Cabinet	...	6.0	9.0	9.0	—	6.2
Sofa-cum-bed	...	4.8	3.0	6.0	2.5	4.4
Electric Iron	...	2.8	4.0	3.0	—	2.8
Sewing Machine	...	2.8	1.0	—	—	2.3
Stove	...	2.8	—	—	—	2.1
Car	...	0.9	4.0	6.0	7.5	2.1
Pressure Cooker	..	0.3	5.0	—	15.0	1.7
Camera	...	1.6	1.0	3.0	2.5	1.6
Sofa	...	1.6	—	3.0	—	1.3
Refrigerator	...	0.2	1.0	3.0	12.5	1.1

REASON (BRAND AWARENESS) FOR PURCHASE

Products	*Advertisements*	*Friends/ Relatives*	*Shop Displays*	*Dealers*	*Others*	*No. of recent purchases (all income groups)*
Cycle ...	14	74	6	11	5	86
Radio ...	14	66	7	14	6	82
Steel Cabinet ...	43	85	—	14	—	9
Scooter ...	17	70	6	11	6	19
Alarm Clock ...	12	62	12	20	—	23
Fan (Table and Ceiling) ...	—	66	6	17	6	24
Wall Clock ...	26	45	7	26	20	15
Sofa-cum-bed ...	—	70	8	—	8	13
Electric Iron ...	20	20	—	10	20	5
Stove ...	8	50	25	25	—	12
Radiogram ...	100	—	—	33	—	3
Car ...	—	100	—	—	—	6
Pressure Cooker:	100	—	—	—	—	3

The general conclusions of this survey include the following: (a) the income of the household determines the place of table fans, sofa-cum-bed, steel cabinet and foam rubber mattress in the consumption pattern; (b) bicycles are not as heavily in demand as might have been expected; (c) future intentions are a bit fuzzy but table fans and motor cycle/scooter demands are fast increasing; (d) reasons for prefering one brand to another seem to rest heavily on information from friends, product features and easy availability. It would be interesting to recheck these results as a result of the movement of the merchants and companies' representatives into the rural areas as reported in the last issue.

Food Control and Distribution : The Government has still under study the question of take over of the paddy wholesale trade. The present tripartite system under which the State Civil Supplies Corporation, the Food Corporation of India and the private traders are responsible for wholesale purchasing is likely to continue for the kuruvai harvest, in order to avoid the disruption caused by the unpreparedness for the wheat take over. The present distribution system performs not only the distribution function, it also aids on the production side, as in this State there is no production of just one or a few standard varieties of rice. Actually the varieties produced are many, depending not only on soil conditions but also the demand preferences of the district and far away parts of the Country and State. In this maze of production patterns and distribution networks in relation to variegated societal needs, the take over has to be fully worked out in every detail in advance both of distribution and its effects on and relation to production. As noted in the last issue of the Bulletin (page 498), the State's

food production is steadily rising, it is able to meet its own needs and has met its procurement target to the Central pool of 1 lakh tonnes. In fact it is one of 3 States where there is no food problem and where the price has not risen but has remained at last year's level, while prices of other goods have risen by more than 20 per cent. In a sense the stakes of the Country and the State in a smooth functioning of food production and distribution in this State are high and it is wise that time should be taken in any change over in distribution. Simultaneously action is being taken under DIR to prevent hoarding and smuggling of food grains. The distribution of food grains, sugar, kerosene and other scarce articles is being undertaken through cooperative agencies on the basis of cards issued to families. With the reduction of the wheat allotment to the State from 20,000 tonnes per month to 15,000 tonnes for July, the 105 co-operative stores, 7 women's co-operatives, 15 fair-price shops and 42 retailers in the city, are making available in addition to the monthly ration of 15 kg. of rice, kerosene, sugar and dhal, a further monthly ration of 3 kg. each of rava, maida and wheat flour. In view of the shortage of rice in the border areas due to extensive smuggling into Kerala where rice is selling at four times the price in this State, in addition to tightening the rice movement in those districts, from mid July the rice ration to the family card holders has been raised from 1,400-1,600 grammes to 2,000 grammes. The areas include Kanyakumari, Pollachi in Coimbatore district, Cumbum in Madurai district and Gudalur in Nilgiris district. 1,739 fair price shops in Kanyakumari district are supplying rice to 12 lakh people. The problem is, however, a complex and difficult one as in the border areas smuggling and trade is a two way affair, a kind of series of barter deals. In the State, fertilisers are in short supply while they are plentiful in Kerala. In some places in the State the open market fertiliser price is double that of the controlled price, and so the movement is for this kind of smuggling and barter dealing as between rice and fertilisers. The real and effective solution is to increase fertiliser production on the one hand to make the open market price come into line with the controlled price, and to supply Kerala with the rice that the State needs. Tamil Nadu in addition to its agreed exports to Kerala of 1.15 lakh tonnes from the Central pool, has also made available 5,000 tonnes of rice as emergency supply as it has done to Mysore and Maharashtra, and is studying further and additional supplies both to Kerala and West Bengal after the Kuruvai Harvest.

Housing and Roads: The progress of the Slum Clearance and improvement programme and the housing programme for low and middle income groups have been referred to in past issues of the Bulletin (see Vol. III pages 90-91, 163-165, 233 and 316-317). At the end of the Fourth Plan, around 4 per cent of the slums in Madras city will have been cleared and the inhabitants provided with tenements. One third of the city's 2.8 million people live in 1,202 slums. 682 schemes have been approved at a cost of Rs. 25 crores, 8,610 tenements have been constructed and allotted to 4,539 families. An additional 6,600 tenements are being constructed. This rather slow rate of clearance is due to the fact that for this programme the State has to raise its own resources. No Union grant is available for this programme, such aid being limited to improvement of existing slums rather than construction of tenements. Even so the progress in this State is far in advance of that of others and the accompanying welfare programme helps in the adaptation of the people to their new dwellings and in making available separate rooms, kitchen and toilet amenities, electricity and child

care and medical aid to people who have been deprived of these elemental necessities, the programme makes a dent on poverty in the city. Further in their new surroundings the women have become earning members of the family, some of them also contributing in garments and leather products to the export earnings of the Country. The problem is to speed up the rate of execution of this anti-poverty programme. The housing programme for Harijans and low and middle income groups is moving less slowly. In July the State Government decided to increase the patta allotment of home sites to each agricultural labour family from 2 cents recommended by the Union Government to 3 cents—as the requisite minimum for building houses. Data on the availability of land is now being collected for this purpose on a State-wide basis. In July, 110 pattas were distributed to Harijan families in the city. For the middle income group, in addition to the 336 houses constructed at a cost of Rs. 64.32 lakhs during the last 3 years, a further 309 houses have been approved as of July. For the low income group (Rs. 100 per month or less), in addition to 140 units built at a cost of Rs. 15.4 lakhs during the same period, a further 93 houses are under construction. In addition 1,000 houses have been built under the "Own your house scheme" referred to in Vol. III page 233 of the Bulletin. The housing programme costs are being steadily reduced (by 10 per cent) through the use of cellular concrete bricks and would be further reduced when it uses the fly ash technology from next year (see page 474 of the last issue). The Union Government's assistance to this growing programme would be even more effective if the procedures for review of projects were streamlined and the assistance granted speeded up.

The roads a programme in the Thanjavur district will receive a spurt from a windfall of Rs. 1.3 crores which had been paid by the Railway Board to the Thanjavur district a decade ago for the Mayuram-Arantangi line. This sum is now being used for road works and construction of bridges in the district. In addition transport facilities in the State will be considerably augmented as a result of the 6 overbridges being constructed at Paranur (Chingleput) and Highway No. 45 linking Madras with Tiruchi and Dindigul. Construction of six more overbridges over the National Highway No. 7 linking Salem with Bangalore and Krishnagiri and Mysore is to start during the current year. This programme to improve the communication facilities of the State and its links with neighbouring States will be continued during the Fifth Plan when thirty further overbridges replacing the present railway line crossings are constructed. Incidentally these projects are also employment oriented. The current year's programme is employing 1,800 workers.

Local Government: The problem of our tradition of centralised administration, plan formulation and project execution has been referred to in earlier issues of the Bulletin (Vol III pages 91, 401). The problems of actually spending the earlier referenced Rs. 1.3 crores by the local government authorities in Thanjavur district following the rules and regulations for obtaining various approvals in Madras, the chasing of files in Madras by Municipal and Panchayat Council Chairmen and the delays in getting medical or text book supplies to local health and educational units among other matters has led the State Administrative Reforms Commission to propose to the Government a reorganisation of the local government machinery and a clear devolution of powers to it. It has recommended that the chairman of the Panchayat Union should be directly

elected by the people in the Panchayat Union and not indirectly by the Union as at present and that no M.L.A. should be eligible for the chairmanship. It has recommended the establishment of a Panchayat Finance Commission to assess the financial needs of the Panchayat Unions over a five year period and to establish the devolution of funds and their distribution among the councils on a rational basis. The State Government should impose the land revenue surcharges and distribute the proceeds on the advice of the Panchayat Finance Commission. It also recommends reorganising Panchayats around 5,000 inhabitants each so that they become financially viable. Suggestions have been made for improvement in the collection of panchayat taxes, the raising of new taxes on new sources and graded grants for village sanitation. At present the State makes two matching grants to the Panchayat Unions for the past five years as follows.

Year	*House Tax Matching Grants*	*Local Cess Surcharge Matching grants (In lakhs)*
1967-68	101.64	240.01
1968-69	107.71	311.40
1969-70	121.23	334.40
1970-71	126.15	343.29
1971-72	115.22	475.84

There should be further financial devolution to the Panchayat Unions. Clerical assistance and checks by inspecting officers will prevent financial malpractices which the devolution proposed may involve. In order to clear the backlog and avoid future logjams arising from audit objections, machinery for dealing with these systematically is proposed. To give an agricultural orientation to the Panchayat organisation which is its main raison d'etre and coordinate the work to this effect of the district collector, a member of the Board of Revenue as Commissioner for Agricultural Production and Panchayat Development should be appointed. This body of recommendations is aimed at decentralised and responsible planning and administration of panchayat affairs which have to do essentially with agriculture, health, education and sanitation. The Government should now decide on the implementation of this valuable body of recommendations.

Welfare Measures : With the closing of all toddy shops in the State from September 1 as referred to in the last issue of the Bulletin (page 473), a programme for retraining and rehabilitation of toddy tappers had been launched by the Government. There are 52,000 licensed tappers and about 90,000 other workers working in the 4 crores palm trees in the industry who have to be rehabilitated. The Tamil Nadu Khadi and Village Industries Board is planning to absorb them in occupations involving the manufacturing of palm fibre brushes, jaggery, neera and sweetmeats. The programme calls for an investment of Rs. 1.58 crores. Similarly the rehabilitation part of the leper beggar homes has begun to yield its first results. The first group of 42 inhabitants of the homes have now been retrained in the facilities provided in the homes and settled in para medical and other jobs, earning Rs. 70 per month. In July the seventh home was opened at Mallavadi near Tiruvannamalai. This home

has attached to it two industrial sheds for rehabilitation purposes. When the 3 further homes are completed, all the 6,000 leprous beggars in the State will be housed in them and after curing, trained for various types of employment and self employment.

National

Fifth Plan : The major issues facing the formulation of the Fifth Plan were outlined in the last issue of the Bulletin (pages 476 to 478). The base year, as pointed out in the last issue (page 475), is the current year 1973-74, where the total plan outlay of Rs. 4,364 crores includes a central outlay of Rs. 2,294 crores. It is now clear that given the rate at which the Central Ministries are incurring expenditures, the rate at which resources are being eroded by the price rise and accompanying wage increases, the mounting deficit financing which has yet to face the impact of the recommendations of the Third Pay Commission and the increasing food subsidy consequent on importing 4.5 million tonnes of wheat, a 10 to 15 per cent cut in the annual Plan outlay for the Central Ministries is inescapable. In this reduced annual Plan the core sector—steel, fertilisers, cement as well as agriculture, power and irrigation – is likely to remain as approved, the cuts falling rather heavily on other sectors including health, education, etc. In later sections of this issue, the price inflation, deficit financing and food imports will be analysed in some detail. The combined effect will be a reduced Plan for this year, but the impact of the reduction on the Fifth Plan will not be determined in purely quantitative terms but as a result of how the Central Ministries distribute the reductions, maintaining priorities and exercising a measure of financial discipline. For the Fifth Plan the choice is between maintaining the financial framework and cutting back on the targets or increasing the financial estimates and maintaining the targets or deciding on judicious combination of both. It is likely that there will have to be some additional resource mobilisation beyond the Rs. 6,615 crores estimated in the Approach Paper. The core sector targets will have to remain substantially untouched. The Steel Ministry's plan for expanding Bhilai to 4 million tonnes, TISCO to 4.5 million tonnes and Bokaro to 4.75 million tonnes and work on the three southern mills at Vishakapatnam, Vijayanagaram and Salem for all of which the outlay of Rs. 2,800 crores has been approved by the Planning Commission but untouched with a recommendation to increase further the capacity expansion. This is supported by the NIDC study that the capacity of HEC, MAMC and other units under Government control can meet the demand for average steel mill equipment increase of one million tonnes with the exception of furnaces which can be met from other Government units. There are, however, a number of assumptions on which this assessment is made, assumptions which must be realised, if the Country is not to continue importing heavily the equipment for the planned expansion. The Agricultural Ministry's Fifth Plan outlay for Rs. 7,300 crores also cannot be touched. It is based on a food grain target of 140 million tonnes per year (against 115 million tonnes for the Fourth Plan), 12.5 million tonnes for oil seeds, 80 lakh bales for cotton, 77 lakh bales of jute and 170 million tonnes of sugar cane. Irrigation will increase from 21.4 million hectares to 24.1 million hectares. Of the Industrial Development Ministry's Rs. 564 crores plan, Rs. 407 crores are for increasing cement capacity from 19.8 million tonnes to 32 million tonnes, paper from 8.5 lakh tonnes to 1.33 million tonnes and newsprint from 65,000 tonnes to 1.6 lakh tonnes. In cement, the CCI—the public sector unit—will establish 6 new plants with a capacity of 3 million tonnes,

and in paper the Hindustan Paper Corporation will carry the major expansion plan. On the other hand the Railway Ministry's plan for a freight target of 300 million tonnes has to be recast in light of diesel and power availabilities and the demands of the user ministries, like steel and industrial development. The road programmes proposed at Rs. 924 crores are unrealistic in light of the Fourth Plan expenditure of Rs. 297 crores against the financial target of Rs. 418 crores. The plans of the Information and Shipping Ministries are also similarly being re-examined, with the port development programme for Vishakapatnam, Madras and Marmagao to enable them to handle 32 million tonnes of iron ore per year and 1.5 lakh DWT ships in the first two ports and 1 lakh DWT ships in the last—being fully supported. In finalising the Fifth Plan there will be hard decisions in the non-core sectors. The Rs. 500 crores provision for staff housing and cars is bound to go. The non-core sector industries producing non-essentials like new cars and liquor projects are also likely to go. If the consumption level for the poor sector—even reducing the number to be helped as in the Tamil Nadu Plan—is maintained, the cut in the consumption levels of the top 2 or 3 deciles will have to be heavier. With food imports and rising prices of crude and fertiliser, there will have to be sound management of our foreign exchange resources and a reduction of non-essential imports, which would be possible if there is a cut in non-essential production. The most difficult decision is to cut on the minimum needs programme (MNP) for which an insufficient Rs. 3,300 crores were originally provided and for which something like Rs. 2,600-2,800 crores are likely to be available. But even here bold decisions must be made. If, for instance, education's provision is cut below the Rs. 2,200 crores originally provided (and it will in view of the cut in the MNP), then the expansion of higher education must be frozen and absolute priority given to primary and adult education. This in any case is desirable from the point of our educational health. The T.V. plans are also likely to suffer a cut. In any case the time table to present the Fifth Plan by September 30 cannot be kept. In addition to the work on the resources picture that is taking time, and the rediscussion with Central Ministries' plans, the States are not ready for discussions, which were to terminate by mid August. The reaction of some of the States to the Union Planning Commission's indication of the financial magnitudes within which the State Plan should be prepared and the additional resources that the State would have to mobilise are essential guidelines without which no realistic planning is possible. Tamil Nadu's indication is Rs. 1,100 crores for the State sector and Rs. 225 crores for additional resource mobilisation. There are not rigid limits. It is necessary for the States to be cautious about starting this year's long term projects which will depend on Central assistance until the resources position is clear. In any case the resources position for the first two years of the Fifth Plan is going to be tight, so that in general new projects should be phased to start in the third year of the Plan. For the Fifth Plan, however, there are for the States two flexible elements. First the nature of the Plan, its strategy and programme which will influence the level and second the Finance Commission's recommendations which will be known in September and which will call for some upward revisions. It is now the duty of the States to finalise their plans and engage in a dialogue with the Union Planning Commission so that the Fifth Plan may emerge by October 30.

Price Inflation : In the July session of the Lok Sabha, the Government announced the inflationary trend in the

following terms: "between June 1972 and June this year, the wholesale prices have gone up by 22.7 per cent in the case of food articles, 4.4 per cent for transport, machinery and equipment and 8.4 per cent in the case of manufactures." The official wholesale price index at June 23 was 0.5 per cent higher at 239.5 and the all commodities price index was higher by 2.4 per cent compared to the previous week. The all India commodity index in May 1973 shows a rise of 19.9 per cent, with food articles recording a 23.7 per cent increase (coarse grains 26.3 per cent, bajra 60.6 per cent, edible oils 64.4 per cent, ground nut oil 101.6 per cent) and industrial raw material registering an increase of 54 per cent (raw cotton 40.5 per cent). The highest price rise has this year been in the food and industrial raw materials groups, while the machinery and equipment group has had a more moderate price rise. This, of course, is one positive factor for the Fifth Plan industrial programmes. The Economic Times survey of food prices in Bombay gives an indication of the steady rise in the prices of food articles.

		Unit	January 1971	January 1973	June 1973	July 1973
Mutton	...	Kg.	12.00	11.00	6.50	6.00
Beef	...	,,	5.00	5.00	2.50	2.00
Potato (good quality)	...	,,	1.85	1.75	1.00	1.00
Onion	...	,,	1.00	1.00	0.60	0.50
Fish Pomfrets (white)	...	Pair	11.00	10.00	6.50	4.50
Eggs	...	1 Doz.	6.00	6.00	4.20	3.10
Sugar	...	Kg.	4.75	4.90	3.50	2.00
Dalda (open market)	...	,,	12.00	11.00	7.05	6.00
Postman Oil	...	,,	11.50	10.10	5.80	4.50
Turdal	...	,,	3.30	3.00	2.60	2.00
Moongdal	...	,,	3.80	3.70	3.40	2.00
Chanadal	...	,,	2.90	2 90	2.10	1.70
Uraddal	...	,,	3.50	3.15	3.40	1.80
Gur	...	,,	4.00	4.00	2.60	1.60
Coconut Oil	...	,,	12.00	11.00	6.60	6.00
Til Oil	...	,,	11.50	11.00	7.70	5.80

In the South, individual prices of meat, eggs are lower, though the trend over this year is the same. For wheat, the open market price increases and disappearance of stocks are common to both regions. The Government's action on the prices situation is one of dealing with prices of individual commodities like cloth, coal, viscose yarn, etc. and sitting back and waiting for the monsoon to increase agricultural output in all groups. Fortunately, for the Country the monsoons this year

have been normal. There are still areas like East U.P. where the rains are inadequate but in the last two years drought affected areas of Maharashtra, Mysore, Gujarat and Madhya Pradesh so important for both food and cash crops the rains have been normal. The rivers in the north and south are in full spate and a good harvest of wheat, rice, coarse grains, oil seeds, pulses, cotton, sugarcane and jute can be expected with a stop to further food price rises. Also the inflationary drought relief programmes in these areas can be discontinued. Now the Government must aim its policy at relieving the shortages in the process industries of cloth, oils, soap, sugar, etc. In this regard action todate has not been satisfactory. In early July the Government fixed cloth prices at the 1972 levels, allowing for a 10 per cent increase to compensate mills for cost escalation and reducing dealers' margin, so that uncontrolled cloth prices would be the 1972 November prices. At the end of the month this voluntary price restraint scheme resulted in the total disappearance of medium quality fabrics and the prices of the fine and superfine fabrics have risen high. The escape hatch here was the stocks lying with the mills which should have been stamped and delivered to the retailers. Similarly an increase in the price of nylon filament yarn has followed the voluntary agreement. Tyre yarn prices have been lowered by the Tariff Commission and consequent lowering of tyre prices should follow. So too, the new viscose yarn prices fixed by the Tariff Commission are raised a little but are lower than the voluntary ceiling price. Other cost escalation factors add to the price rise. The wagon shortage and mismanagement leads to road haulage of coal which adds considerably to the cost. The delays in issuing release orders on import licenses for scarce metals by an average of 9 months means that the amount actually imported is far less because of the steep rise in international prices. The price policy must deal with these contributory factors. Apart from shortages and pricing policy, the other element which needs to be controlled is fiscal and monetary policy.

Deficit Financing and Monetary and Fiscal Policies : In addition to the official figure of Rs. 848 crores as against the budgetted Rs. 251 crores and revised Rs. 550 crores as the deficit finance for 1972-73 analysed in the last issue of the Bulletin (page 477), the Government has announced that for the first three months of this year, April-June deficit financing amounted to Rs. 380 crores against the budget of Rs. 85 crores for the whole year (the analysis in this Bulletin forecast the deficit after acting on the Third Pay Commission Report at Rs. 250 crores—see Vol. III page 234). The principal causes for the first three months, deficit being 4 times that budgetted for the whole year, are the provision of interim relief to the Union Government employees, increased defence outlay, earmarking of funds for food imports, relief operations, the left-over expenditures of the ill-fated emergency rabi programme and subsidised public distribution system which have all contributed to this awesome deficit. The inflationary effect of this deficit financing is recognised by the Government. At the July consultative committee meeting of the Lok Sabha the Finance Minister admitted that "deficit financing is indisputably a major factor responsible for the price rise". The corollary is that the Government must now exercise the strictest financial discipline at all levels—particularly at the level of the Union Ministries.

Money supply in the hands of the public has been a further inflationary factor. At June 8 it amounted to Rs. 98,333 crores representing an increase of 14.6 per cent over the year June 1972-June 1973, a year

when the aggregate supply of goods did not increase, all evidence being that the deceleration in real output might show a zero growth rate. There has to be a contraction of money supply—and to start with no further expansion. Bank credit has also played its role in the inflationary situation. The 1972-73 busy season credit expansion of Rs. 884 crores was over double that of the previous year, with the then increase in the net credit to the commercial sector being four times that of the previous year's busy season. Some part of this increased credit (and it should be possible for the RBI to organise its reporting system to identify the exact amount) was used to finance speculative holdings and inventories. Before the May 30 bank rate rise and other measures to curb credit expansion by the RBI, in the two months April and May, banks increased their RBI accommodation by Rs. 84 crores and their borrowings from it stood at Rs. 108 crores on May 31, 1973 against Rs. 26 crores on May 31, 1972. Even after the May 30 restriction which increased their statutory reserves to 5 per cent, resulting in RBI deposit increase by Rs. 222 crores, their indebtedness at June 29 stood at a high Rs. 141 crores, which in the following week was lowered to Rs. 40 crores. To further restrain the inflationary effect of bank credit, RBI withdrew from mid July all refinance entitlements except for export credit and primary credit societies and farmer's service societies. The obligations to serve the priority sectors stand but this servicing must be met from their own resources and increased deposits. The fall in the credit deposit ratio from 72 : 100 in June 1972 to 69.8 : 100 in June 1973 is a wholesome trend. The banks have been asked to step up mobilisation of deposits and increase the savings rate particularly of the rural community. Its record for the past 4 years, since nationalisation, in opening 6,892 new offices involving a doubling of rural branches to 5,474 and a doubling of deposits received to Rs. 9,018 crores is good. These, however, should be the basis for investing and accelerating the mobilisation of savings. The Government's two small saving schemes launched in July, the 2 year post office time deposits with 7 per cent taxable interest and the seven year national savings certificate with 7.5 per cent taxable interest should mobilise further rural and urban savings.

In this connection, the second central loan of Rs. 325 crores announced on July 12 resulted in a total borrowing of Rs. 357.63 crores. Allowing for the repayment of the July 72-73 maturing loan of Rs. 159.08 crores, the net mobilisation of resources on this second loan was Rs. 198.59 crores. The banking system subscribed to the loan without recourse to the RBI and little impact on the money market. With the first loans raised of Rs. 550.32 croresa (See Vol. III page 403 of the Bulletin), the two loans have yielded an aggregate amount of Rs. 910 crores against the budgetted estimate of Rs. 880 crores, net borrowing being Rs. 356 crores against the budgetted amount of Rs. 326 crores. Given the easy conditions in the money market, the Government can now plan the borrowing for the State Governments of an aggregate of Rs. 550 crores and a net amount of Rs. 150 crores.

Grain Takeover and Food Imports: As at July 23, 4.3 million tonnes of wheat had been procured against the original target of 8.1 million tonnes and the revised target of 6 million tonnes. In the last issue of the Bulletin (page 480), it was noted that as at June 19, 4.1 million tonnes had been procured. When the bonus scheme described in last issue was announced on June 14, 3.7 million tonnes had been procured, so that the scheme simply added 6 lakh tonnes and has cost the treasury Rs. 13 crores shared between Punjab and Haryana and to a small extent Madhya

Pradesh. The nine reasons given by the Union Minister of State for Agriculture in the July session of the Lok Sabha for the failure of the procurement operation, lower wheat production, withholding of wheat by farmers because of the low procurement price and the hope to sell later for higher prices, improvement in their capacity to withhold stocks, the general psychology of shortages leading to hoarding by every one, shortages in the open market and restricted issues in the public distribution system, action against the system by wholesalers and some opposition parties in some States and the effect of the price rise in all consumers goods, are a sound if not comprehensive inventory. The major reason was that the Government had not prepared the farmer and the retailer for this important and necessary step and had not used all its resources of persuasion, mobilisation through cultural and civic bodies as well as compulsion. Except for the Punjab, the wheat producing State Governments, including members of the legislature were not behind the measure as can be seen from their performance. As on July 23 Assam procured 8,000 tonnes against a target of 20,000 tonnes, Bihar 49,200 tonnes against 6 lakh tonnes, Gujaart 43,000 tonnes against 1.5 lakh tonnes, Haryana 5.6 lakh tonnes against 13 lakh tonnes, Himachal Pradesh 18,000 tonnes against 60,000 tonnes, Madhya Pradesh 1.9 lakh tonnes against 4 lakh tonnes, Rajasthan 1,4 lakh tonnes against 3 lakh tonnes and U.P. 7.5 lakh tonnes against 18 lakh tonnes. As a result in addition to the 1.6 million tonnes of wheat which have been imported and a further 4,00,000 tonnes to arrive shortly, the Government has decided to purchase additional wheat of the order of 4 to 4.5 million additional tonnes. This latter figure has not been officially announced but is in the air. This decision has been taken at a bad time as the international wheat stocks are low and the large imports by U.S.S.R. and China have pushed up prices. The stocks have declined from 42 million tonnes to 37 million tonnes in the U. S., from 26 million tonnes to 21 million tonnes in Canada, from 11 million to 7 millions in Australia, with only Argentina going up from 5 million tonnes to 8 million tonnes. The U.S. price which was $60 a tonne last year, was $80 in May and is now $123. The result is that if India imports an additional 4.5 million tonnes it will be at a cost of Rs. 560 crores. One action is now needed and that is to raise the issue price of wheat and coarse grains by Rs.12 and Rs. 10 per quintal and so reduce the cost of the food subsidy by Rs. 100 crores. Against this grim picture, the distribution channels in Maharashtra, Gujarat, Bengal, and Kerala continue to be starved of their quota and rendered unfunctional in many cases. The continuous supply of wheat and coarse grain to the fair price and ration shops is a continuing urgency.

Water : No further progress was made at the seventh Conference of Ministers of Irrigation and Power, meeting in July in Kodaikanal in carrying forward the conclusions and recommendations of a national water policy set forth at its Sixth Conference in Srinagar (see Vol. 11 No. 8 pages 9 and 10). At the Seventh Conference the Union Minister reiterated the need to declare water as a national asset and the intention of the Union Government to amend the constitution for this purpose so that a national water policy can be evolved, equitable distribution of water to different parts of the Country ensured and inter-State water disputes settled by conciliation or arbitration. The Union Minister also repeated the arguments for a national water grid as stemming from the fact that water was becoming a scarce resource due to the increasing population and accelerated water use, the varying distribution of the Country's water re-

sources, with the North and East having plentiful supply because of the melting of the Himalayan snows and the monsoons while the west and the south faced continuing deficiencies and finally the recent technologies of civil engineering construction, power generation and large scale pumping. Even the two years drought that the Country has passed through did not lead to a meaningful discussion of these proposals which could start with regional grids and Regional and State Water Councils. A National water policy council does not need a constitutional amendment and all the debate about the Centre versus the State that it would provoke. The proposal for a National Electricity Authority provoked exactly that kind of debate. The decision of the conference on water was in a sense a step back over the Srinagar Conference discussions. It was decided to set up a committee of Ministers to look into modern trends in irrigation and water resources developments such as water utilisation and management in the Country and other countries and make recommendations thereon. It is hoped that the committee will set the stage for a water policy for the Country and the States and recommend the appropriate machinery and programmes for it.

National production front

Industrial growth : The Union Government announced that the Country's industrial growth during January-March 1973 declined by 1.8 per cent compared to the first 3 months of 1972. This is not surprising as the year will show the cumulative effects of power cuts, raw materials shortages and deficit financing. Further in 1972 industrial growth was 7.1 per cent compared to the poor 2.9 per cent in 1971. The manufacturing group comprising wood and cork production (34.8 per cent), petroleum products (15.2 per cent) paper products (15.2 per cent), rubber products (12.3 per cent footwear 5.8 per cent electrical machinery (5.2 per cent) etc. declined by an overall 1.3 per cent while the electricity generated group rose by 1.4 per cent and mining and quarrying by 2.6 per cent. It is too early to draw any general conclusions on the industrial trends for the year. The investment climate needs to improve as measured by the number of letters of intent issued (216 for the first six months vrs. 877 in 1972), industrial licenses granted (128 in 3 months against 563 in 1972) and the capital goods approvals for 1972-73 which was Rs 129.81 crores. With the restoring of power, liberalising imports policy for import of scarce raw materials and the simplification of the procedures by the unified secretariat being set up to process licenses and clearances, industrial growth should pick up during the second half of the year. The high level monitoring and evaluation unit in the core sector established in July under the charge of the Prime Minister with the help of the four high level consultants should ensure good performance by steel, fertilisers, power and oil both at the construction stages of new plants and the production performance of existing units. Through this the Union Planning Commission will be contributing its share to removing bottlenecks on project execution and identifying the areas and causes of industrial lag calling for quick action to solve such problems. There is thus no lack of machinery for a good second half year record. The Ministry of Heavy Industry has established a production target of Rs. 424 crores for the year compared to the production of Rs. 278 crores last year. The Bharat Earth Movers (BEML) registered a production of Rs. 42 crores for 1972-73 (a 20 per cent increase over the previous year) and will produce 300 broadgauge coaches, two diesel car sets and earth moving equipment for the Country and Nepal during the year. Heavy Engineering Corporation with the

help of 50,000 tonnes of Soviet equipment and parts is increasing its capacity from 39,000 to 50,000 tonnes. Scooters India goes into production this year with an annual capacity of 1,00,000 scooters to be produced through a number of SIDCOs. HMT with a planned capacity of 860 watches will concentrate on major components, allowing ancillaries to produce many of the parts. BHEL and HEIL are being merged and units like Jessop will now meet their equipment needs so that BHEL can meet more speedily the generators orders, canalising the import of small (62.5 MW) and giant sized (500 MW—1,000 MW) generators for the SEBs. The private sector also now must work to full capacity, use ancillaries and be helped by the Government procedures in regard to licensing and pricing.

Steel: Steel availability for the year will be larger than last year because with the ending of the power cut HSL and TISCO production has been resumed and 7,00,000 tonnes wil be arriving in the country before the year end. A further 1 million tonnes of steel is being imported so that there should be some let up in the scarcity situation. The total availability from resumed internal production and imports of 1.7 million tonnes will add 10 per cent to the total steel supply compared to that of last year. If coal, iron ore and manganese ore are lifted according to target and transported to the HSL, TISCO and Bokaro plants and if the railways can give priority to steel movements, the distribution of increased supplies will help industrial production. Of particular importance is the increase in the quota allotted to the small scale sector by 40 per cent for the period July-September. This sector has suffered a calamitous decline due to the power cut and serious raw materials shortages and the increased steel availability can help the units some way. Even so we have a long way to go in adequate steel supply. As against the US per capita steel ingot productivity of 244 tonnes and of Japan of 280 tonnes, Bhilai went up in 1972-73 from 76 to 78 tonnes, Rourkela from 41 to 58 tonnes and Durgapur from 36 to 38 tonnes. A related issue is the extent to which the Country's investment resources should be used to intensify investment in mines and export of iron ores. The Country's total iron resources are estimated at 10,269 million tonnes, with 8,244 million tonnes being 55 per cent iron content haematite ore and 2,025 million tonnes 25 per cent iron content magnetite ore. Currently (in 1972), 35 million tonnes of iron ore is being produced, 13 million tonnes being used internally by our iron and steel industry and 22 million tonnes being exported (with 18 million tonnes to Japan). MMTC and the Commerce Ministry would like to increase the investment in iron ore mining sector, so that by the end of the Fifth plan 66.5 million tonnes are produced, 24.5 million tonnes for our steel plants and 48 million tonnes for exports. The Planning Commission would like to peg exports at this level of 48 million tonnes for the future, so that internal consumption by the steel industry is speeded up and given the rather low returns from iron ore exports, the heavy investment it calls for in mining, port development and railways could be more fruitfully deployed in other units of production. This issue needs more careful cost-returns and ICOR analysis and should be resolved during the early years of the Fifth Plan.

Crude : Further to problems of the price of crude outlined in the last issue (page 486), the Union Government has agreed to the increase of more than 20 cents per barrel of the 3 oil majors. Burmah Shell and Caltex will be allowed to import crude at $ 2.55 per barrel from July and Esso at $ 2.428 per barrel from July 6. This is the fourth increase granted

since January of this year, from $ 2.08 per barrel at that time. This is certainly not the end of the road as pointed out in the last issue, as the second Geneva Agreement of the companies with OPEC provides for monthly review of crude prices to take into account currency fluctuations and other factors. The burden on the Country of the increasing outgo of foreign exchange on this account will grow in the coming years. The Government has received 10 offers from international companies for its offshore exploration programme. The 3 foreign companies in India have not made offers because their capital resources are committed in West Asia, Indonesia and Australia. The Government is examining these offers. It would like to enter into contractual arrangements (and not on equity participation basis), so that the chosen company will be reimbursed from a share of the production for its expenses. The real problem both in regard to Bombay High and other sites is the almost complete absence of Indian know how and technology in this field. This programme calls for not only heavy foreign capital investment but complete foreign technology. The NCST and the Union Ministry should address themselves to this problem and plan a training and R & D programme to fill this gap.

Textiles : Under the July agreement for the 7 day week between the Bombay Mill Owners Association and Rashtriya Mill Mazdoor Sangh, production of cloth and yarn in Bombay's textile mills will increase by Rs. 50 crores (15 per cent) per annum. When all 56 mills implement the 7 day agreement, employment will increase from 2.25 lakh to 2.5 lakhs and wages increase by 4.25 crores annually. There has been some agitation against the agreement on the part of some Unions who are opposed to the grouping of workers in 7 batches with a rotating weekly holiday for each batch. The agreement has been suspended for a month in order that there may be consultation and negotiations with all unions and in order to enable mills which have not done so to introduce the third shift. The effects of the restoration of power also needs to be taken into account. The Union Ministry of Commerce has also raised the question as to whether policy should be developed so that the mill sector should increasingly cater to the needs of the exports markets and the handloom sector meet the growing demands of the home market. This is too generalised and abstract an approach. The mills will not give up the lucrative home market and the ICOR and employment consequences need to be examined. The trends may be in the direction suggested though the decentralised sector also has an important export clientele. The mills will soon be faced with a 20 per cent rise in cotton support prices for the coming season on the basis of the APC studies. This cotton price increase regularises the current price trend and general inflationary situation in the Country.

Cement: As against the demand of 19 million tonnes of cement for this year, the production will be around 15 million tonnes. Because of power cuts, inadequate coal supply and industrial unrest, the first six months production was 7.02 million tonnes against the target of 8.37 million tonnes The Government has therefore agreed to the expansion of the capacity of five large houses by 3 million tonnes. The applications are being sponsored by the Monopolies Commission. The cement manufacturers Association predicts a decade of shortage. The Government's Fifth Plan capacity expansion of 12 million tonnes referred to earlier must be executed on schedule, if the demands of the deficit area are to be met. In the meanwhile the rational transport of cement by the railways should also be assured.

Sugar: As forecast in the last issue, with the conclusion of the crushing season from October 1, 1972 to June 20, 1973 sugar output amounts 37.9 lakh tonnes and will be 38.7 lakh tonnes. The Co-operative sector contributed 14.29 lakh tonnes and the increase in UP and Bihar Production was . 5.8 lakh tonnes The sugar stocks with the factories at June 22 were 18.11 lakh tonnes (compared to 15.81 lakh tonnes a year ago). The sugar production trends are thus on the up grade. The Government has announced that the cane price for the next season will continue at Rs. 8 per quintal linked to a recovery of 8.5 per cent with a premium of 9.4 paise per every additional 0.1 per cent recovery as reported in the last issue (page 482). The 70 per cent levy is to continue and the levy price of sugar is expected to be announced next month. The Government has not yet made its decision on the Sugar Industry Enquiry Commission report (see last issue of the Bulletin page 483). This decision is of importance to both the industry and the consumers.

Agricultural Production: With the late monsoon and its weakening in early July the target for the year has been lowered from 115 million tonnes to 107 million tonnes. With late July rains it is hoped that the target can be restored and possibly surpassed. But the reason for the target reduction is the shortages faced by the farmer in essential inputs. Kharif sewings were well under way in all States with the strengthening of the monsoon after mid July. The Kharif production target of 67 million tonnes faces problems of distribution cf HYV seeds and fertilisers in some States. The overall fertiliser availability is limited by the tight internal and international supply situations and the distribution of the available stocks to farmers is not proceeding smoothly. Fertilisers are being imported with less nitrogen to save on freight cost to make up for the shortfall in internal production of 11.5 lakh tonnes against the demand for 16 lakh tonnes. For the year 8.5 lakh tonnes of urea are being imported from Japan, Poland, Bulgaria and 7 other countries. Similarly HYV seeds availability is limited as the seeds production programme is still not well organised and States' estimates of their needs are not always accurate. There is, therefore, a trend to concentrate the application of scarce inputs in areas which have a high production potential, modifying the plan to extend HYVS, to 2 5 million hectares, over the previous year's total of 22.5 million hectares. Plans are also underway to increase extensively the sowing of drought and pest resistant Kalyan Sona and Sonalika wheat varieties in November. New varieties of HYV wheat like Dorum are also being made available to Maharashtra, Mysore and Madhya Pradesh and these varieties are particularly resistant to pest to which this area is open. The success of the wheat crop this season is particularly important because of the world wheat shortage noted earlier. The International Wheat Commission estimates that the export demand for the year will be 64 million tonnes while the output available will be only 56 million tonnes. means that wheat stocks which now stand at 28 million tonnes compared to 47.5 million tonnes last year will be further lowered to 20 million tonnes. It is expected that the Soviet Union will import 10 million tonnes this year (despite a good winter harvest), India, Pakistan and Bangla Desh 7 million tonnes and China 6 million tonnes. India's import requirements which vary from 4-6 million tonnes have been referred to earlier. Another area to which special attention is being paid is intensified dry land farming and the lowering of the cost to the farmer of the new technology including the pesticides and insecticides he must employ. The

Country's dry lands are not uniform and therefore each area's special traits call for specialised techniques and appraisal. The long run programme for all these areas is to establish the balance between water, plants, soil, animal and human population which has been destroyed and has resulted in varying degrees of aridity. This will involve development and management of irrigation resources with some kind of ceiling on water holdings in drought prone districts; soil and moisture conservation including afforestation, grass cultivation and water harvesting; restructuring cropping patterns using deep root crops and the new varieties like Sunflower and Safflower—rather than paddy and sugarcane—which are water intensive; development of livestock and communications. This kind of ecological approach will restore to the arid areas a degree of agricultural prosperity. In the cash crop area, unlike last year's less than 60 lakh bales of jute output (See Vol. II No. 12 page 17), this year the crop is expected to yield between 75 lakh bales to 80 lakh bales. To prevent a sharp fall in the price received by the Jute producers, the Jute Corporation of India is purchasing 10 to 12 lakh bales and plans to build a buffer stock of 5 lakh bales, using also the 6 lakh bales to be imported from Bangla Desh. Not only is action being taken to prevent fall in prices, APC has recommended a rise in price from Rs. 115 to Rs. 125 per quintal in view of the rise in the price of inputs to the farmer. The jute mills are caught in a squeeze because the use of synthetics has led to a fall in the international demand for jute goods and internally the lower output of food grains and cement and the use of polythelene bags for fertilisers has reduced the demand for jute gunnies. With the increase in agricultural and industrial production for the balance of this year, demand should increase though not to the extent of raising the price to Rs. 195 per quintal demanded by jute growers. For cotton the current estimates are an output of 62 lakh bales and a carry over of 23 lakh bales from the last season, giving a total supply of 85 lakh bales. The APC recommendation for raising cotton support prices has been referred to earlier.

The irrigation potential of the Country and its effective use was once more highlighted at the Kodaikanal Conference of State Ministers of Irrigation and Power to which earlier references have been made. As of today only 25 per cent of our cultivated land has assured irrigation and we have long way to go to provide the mass of our farmers with their main input—water. What is remediable is the underutilisation to the extent of 1.6 million hectares of land of the irrigation potential already created. The ministerial Committee which was set up at the sixth Conference to study this problem, points out that this underutilization involves not using Rs. 400 crores of capital and using only 87 per cent of the potential created. The utilisation lag centres around 8 major irrigation projects (equivalent to 0.95 million hectares) and 4 States (Andhra Pradesh, Bihar, Maharashtra and Uttar Pradesh) as far as medium works are concerned. Before further major irrigation works are undertaken this unutilised potential should be put to use through decentralized planning and efficient distribution of the waters. Another bottleneck is drainage whose absence leads to water logging and salinity. A good distribution of this responsibility is for the farmer to be made responsible for drainage in his land and for the State to be responsible for intermediate and major drains. The conjunctive use of surface and ground water which is the strategy for this State's agriculture as established by the State Planning Commission, depends on scientific and full development of tube wells and their energisation, with assured power

supply. On other sources of irrigation, canals and tanks, there is need for the States to co-operate with the local bodies to correct the current neglect of our 5 lakh tanks which suffer from growing silting. These and the reservoirs must be cleared. Land and water management practices for arid areas to to which reference was made earlier are an essential part of spreading our irrigation resources and using them more effectively.

Exports and Imports: In the last issue of the Bulletin the 17 per cent exports growth performance for 1972-73 was analysed (page 491) and the future targets referred to. Last year's record was due to the opening up of Bangla Desh for Indian exports and the very good performance in traditional items like textiles, leather and leather goods and handicrafts. Also there was the gain from changing exchange rates. For this year and the Fifth Plan, there is need for a new strategy and need for reliance on long term factors. Last year's increase in engineering exports of 19 per cent must be further accelerated. Several engineering goods categories such as automobiles and auto parts, bicycles, hand tools, iron and steel castings, transmission equipment, diesel engines are in increasing demand. Here the international demand pattern is changing and our export industries and structure must adapt themselves to it. With the growing industrialisation and development programmes of West Asia, South and East Asia, Africa and Latin America and with the concentration of Europe and North America on sophisticated machinery equipment, the demand for engineering and industrial products is mounting. Auto tyre exports for instance which declined a little last year due to power cuts and industrial exports have a growing and varied market ranging from Yugoslavia and Iran to GDR and North Korea, the latter alone placing a bulk order of Rs. 1 crore. It is therefore good that the Union Government has set up a panel to work out a new export strategy to cover new dimensions of the export trade, diversifications and joint ventures abroad. Viable long term export promotion schemes in this context together with the plan to generate exportable surpluses in non-traditional goods over the next six years through increased capacities are moves which are appropriate and sound. With the enlarged EEC offering a large market for our engineering and non-traditional exports provided they are competitive in quality and price and the growing demand of the USSR and East Europe for our non-traditional exports, a variety of measures—increasing capacity, establishing export units, importing upto 30 per cent of needed raw materials and the flexible use of industrial licensing will be needed. For the present, with the lifting of the power cut and the resumption of normal yarn production the export orders of cotton yarn of Rs. 8 crores from Poland and Rs. 10 crores from Czechoslovakia should be met. The textile mills in these two countries have oriented their looms to suit Indian yarn and this important export market should be fully served. With the large sugar production for this season at 39 lakh tonnes and a certain carry over of 8.5 lakh tonnes and next season's forecast being 43 lakh tonnes, an export of at least 5 lakh tonnes of sugar could be arranged. With the present high prices ruling internationally (£ 96 per tonne), sugar could be for the year a good foreign exchange earner. On the import side, the Government is arranging for quick clearance of capital goods imports for the engineering units. STC is importing 1.3 lakh tonnes of edible oil to meet the serious shortage in the Country (note the over 100 per cent price rise in 12 months in groundnut oil referred to earlier), of which 60,000 tonnes have been received and distributed. Another scarce item, newsprint is being

imported upto 1.38 lakh tonnes against the demand for 2 lakh tonnes. STC has learnt from its experience with newsprint and other essential imports and is now entering into long term arrangement, a kind of roll on 2-3 year plan for the import of needed goods at stable prices. India's negotiations with EEC on the trade agreement are still at the discussion stage. Rather late in these negotiations in mid-July, India put forward certain general policy, principles as a basis for more specific proposals. The policy issues have been set forth in Vol. II No. 11 p. 15 and Vol. III pp. 249 and 335 of the Bulletin, but now the time is for specific proposals. Even the proposal for a long term commercial cooperation agreement faces the problem of mutual political and economic objectives. India wishes to go beyond the consolidation of existing commodity agreements and make the joint commission a negotiating and not a supervisory body. Given the resistance of some members of the community to this approach, India must now propose specific mutually advantageous trade and exchange agreements. As of July when the third round of negotiations ended, this was not yet attained.

Aid: In mid July India and Canada signed a $50 million loan agreement for the supply of fertilisers (potash and other varieties), wood pulp and metals which are in short supply. These commodities will be purchased by the Country over the next two years. The PL-480 discussion between the Union Government and the U.S. Ambassador has now entered the stage of discussion of specific proposals. The U. S. proposal is to write off two thirds of the aggregate Rs. 2500 crores (See pages 410 and 493 of Vol. III of the Bulletin) as a contribution to India's Fifth Plan and the utilisation of the balance in ten equal annual instalments. This is a good basis for negotiations. The annual instalments amount to Rs. 80 crores a year which the embassy could not spend on itself and its projects in the Country. At the height of U.S. activities in the sixties in India, the U.S. embassy and its sponsored projects expenditures amounted to less than Rs. 50 crores. It should be possible to fix the annual payments around this figure and lengthen if necessary the period of repayment of 15 or 16 years. In the meanwhile the Government should ensure that various research and educational projects dependent on PL-480 funds are not interrupted but allowed to be carried on without delays.

International

Bangla Desh: The First Five Year Plan of Bangla Desh started on I July, 1973. The Plan's analysis of the economy's constraints is clearly set forth. The first constraint is all round shortages of all essential commodities. Taking 1969-70 as the base year, it points out that due to drought, floods and poor inputs programme, rice production in 1972-73 declined by 15 per cent and capital output by 20 percent. Even after the 28 lakh tonnes food imports, a gap of 10 per cent over the needs exists. Industrial output decreased by 30 per cent due to industrial unrest and lack of managerial expertise. Production of jute fell by 28 per cent, textiles by 28 per cent, and sugar by 80 per cent. Only steel, fertilisers and ship building maintained their pace. The disorganised uncoordinated transport system could not feed the industries with their raw materials or the consumer markets. Import of non-food items was 33 per cent short, due to poor licensing policy. In result, the GNP for 1972-73 was 12-14 per cent lower and the per capita GNP was 20 per cent lower than the base year 1969-70. The other constraint was the price inflation which increased three to four times. In this period of

short falls, bank credit to nationalised enterprises and deficit financing increased money supply from Takka 383 crores to Takka 710 crores. This picture is very similar to that of Indian economy—only its analysis is more forthright and frank. The First Years Plan is aimed at increasing availabilities of essential goods. It is for takka 5,000 crores, broken into subsistence investment of takka 550 crores, takka 3950 crores for the public sector and takka 500 crores for the private sector. It aims at 5 5 per cent growth and reducing imports and increasing exports to meet the foreign exchange needs of the Plan. It is to be hoped that the new Indo-Bangla Desh three year trade agreement signed on July 6 and the earlier agreement on the Indian offer of Rs. 60 crores credit to Bangla Desh (see last issue of the Bulletin page 494) will be tied in with its Five Year Plan. Under the new trade agreement, each country will import goods worth of Rs. 30.5 crores either way each year. Bangla Desh will import Rs. 5.20 crores of tobacco, Rs. 7.50 crores of cotton, Rs. 2 crores of cotton yarn, Rs. 1 crore of textiles plus coal, bicycles, drugs and pharmaceuticals, books and journals. India will import from Bangla Desh Rs. 20 crores of jute, Rs. 3.5 crores of fish, Rs. 4.5 crores of newsprint, Rs. 1 crore of leather etc. The agreement will start on September 28 when the existing limited payment agreement expires. The new agreement provides for continuous review and modification which should be used to meet Bangla Desh Plan needs during the year. The Indo Bangla Desh Joint River Commission meeting in July recommended studies on flood protection in the Sylhet-Cachar region leading to appropriate projects and the construction of dams and storages for irrigation and power development in the Brahmaputra and Ganges basins. Coordinated programmes of work by the meteorology, flood gauging, forecasting and telecommunications organisations of the two countries have also been decided upon.

Monetary Crisis and Monetary Reform: July saw a serious weakening of the dollar and the pound. During the first half of July the two currencies' exchange values continuously declined, reaching a record low of 2.6750 Swiss Francs to the dollar. The pound was declining equally fast but continued this trend through the second half of the month also, touching $2.4725 to the pound. Gold continued its sky rocketting reaching $127 an ounce in London and $ 132 an ounce in Paris. As a result of support to the dollar by the Central Banks of Europe and the decisions of the U S. Government to intervene in support of the dollar, its further decline was arrested in the second half of July. The U.K. raised its Bank rate from 9 to 11 5 per cent (the highest in British history) with a view to stop the fall in the pound's exchange rate. In two months the pound has declined by 19 per cent against the West German mark, 12 per cent against the Swiss Franc and 10 per cent against the French Franc. The underlying causes for the declining pound and dollar, namely, inflation, unbalanced trade and in the case of the U.S., political preoccupations, however cannot be corrected by intervening in the money market to shore up exchange rates or adopting a tight money policy. To make matters worse, West Germany is following a tight money policy (call rates are 40 per cent and short dated Euro marks 15 to 20 per cent in Frankfurt) in an attempt to contain internal inflation. Two broad conclusions emerge. First the system of floating exchanges has failed and second it must be replaced speedily by a new world monetary system. Every day the present system continues, the trade position of the developing countries is seriously eroded and their debt servicing burden is being increased. The July 30 and 31 meeting of

the Committee of 20 has a penultimate chance to right this situation. Their deputies have prepared the ground on minor issues. They have agreed that the official gold stocks now immobilised in the central banks (value at $50,000 million at the official rate of $42.22 an ounce while the free market is above $ 120 per ounce) can be sold as part of the new system. They have not faced the question at what price but the answer is obvious. There is a case for fixing the official price at $ 120 per ounce as suggested in the last issue (page 495) and to delink gold and the new system. They have also agreed that balance of payment deficits and surpluses will be settled not by using one reserve currency, the dollar, but buying and selling several currencies. Now the dollar can go its way and find its own values. Even the United Nations is searching for a system of expressing its accounts in multi currency, as it has suffered very heavy losses through maintaining them in dollars. Now it is for the Committee of twenty to decide on the major elements of the new system, the system of fixed parities with an adjustment mechanism: the system of settling accounts through a strong and reorganised IMF which should be given the resources to do that: SDRs as unit of account: and finally the link between SDRs and development assistance. Time is running out for this agreement on the new world monetary system. The developed countries face as an alternative a prolonged period of recession and the developing countries a set back in their development.

GNP of Developed Countries: Because of the revaluation, the per capita GNP of West Germany is the highest in the world. Till the end of June it was equal to that of the U.S. at $ 6000, but with the revalued rate is 0.2 per cent higher. This of course is a reminder that GNPs reflect exchange rates changes and realities (or unrealities) and not only relative levels of living. Against the dangers of recession referred to earlier, OECD reports that its member countries GNP growth is 7 to 7.5 per cent this year, and if the inflation in the countries can be contained can carry on at that rate into 1974. This upsets the U.N. Development Strategy which proposed a 6 per cent GNP growth for the developing countries and a 3.5 per cent per capita growth and a 4 per cent growth for the developed countries with a 3 per cent per capita growth as one means of slowly closing the gap between the two. With the stagnation in the developing world, the gap will widen, at least in the first half of the Second Development Decade. The 1973 adjusted GNP growth rates are Canada 7.25, U.S. 7.25, Japan 13.5, France 6, West Germany 6.25, U.K. 6.25 and Italy 4.5.

World Trade & GSP: With the entry of U.K. and Denmark into the Common Market's tariff system from January 1974, the cut back in the developing countries trade with those two countries and the Common Market will be compensated by increased trade among the members of the community and the rest of Europe. The Common Market's GSP will benefit only a small percentage (about 4-6) of the trade of the developing countries and will certainly not offset the 60 per cent trade now entering free or with preferential tariff into U.K. and Denmark which will be lost. The quota system and the sensitive products system restrict the entry into the Common Market of products with the best growth potential of the developing countries. The major set back for them will be when the free trade phase in ECM begins in 1977 which will result in the developing world losing around $700 million in trade to the former EFTA countries in carpets, furniture, vegetables, textiles according to UNCTAD. These are important issues that the coming GATT

negotiations should take into consideration.

World Debt Servicing and World Aid: Debt service payments of the developing countries are increasing twice as fast as their export earnings increase, while aid to them is stagnating and even decreasing in terms of official and gross aid. OECD reports that total aid for 1972 was 0.77 of the GNP of the donor countries, as against 0.82 per cent for 1971. The increase in this total aid was 7 per cent but at constant exchange rates was only 2 per cent. If allowance is made for the price inflation factor the total aid was 3 per cent less than in 1971. The concept of total aid is however questionable (see the second article in this issue) as it includes a great deal of commercial credit provisions which under no accepted definition can be termed aid. Official (Government to Government) aid which was 0·35 per cent of the GNP of the donor countries in 1971 fell to 0.34 per cent in 1972 as against the U.N. and UNCTAD agreed target of 0.7 per cent to be attained by 1975. On the other hand the debt service payments of the developing countries which increased at annual average of 9 per cent in the sixties are increasing at the rate of 18 per cent in the seventies. Their total external debt which was $21.6 billion in 1961 became $75 billion in 1971. For countries with a per capita GNP of less than $100, the debt service ratio rose from 4 per cent in 1965 to 8.1 per cent in 1970, those with $200-300 per capita GNP faced a rise from 3.8 per cent to 8.8 per cent in that period. 51.3 per cent of the debt of the developing countries is owed bilaterally, 20.4 per cent to multilateral institutions and 28.2 per cent to private creditors. Caught between declining aid flows and an increasing debt burden, the World Bank and UNCTAD propose rescheduling of debts in an organised and continuous manner in the short term and creating new machinery or reorganising existing ones to look at debt servicing in the context of development and the term and volume of capital flows which are available to the developing countries. Here again time is running out. By 1980, 17 countries including India accounting for 52 per cent of total debt payment, will have a debt service ratio of 20 to 25 per cent. They will be like our poor peasants who are in the hands of the money lender. It is possible to work out a solution that is equitable to both sides.

Asian Rice Fund: India joined the Asian Rice Trade Fund, signing the agreement on 29 June. The Fund as explained in Vol. III page 342 of the Bulletin is aimed at helping to stabilise and expand intra-regional trade in rice. It is not starting out at the most auspicious moment, as there is a very tight rice supply position in South East Asia. Thailand has banned rice exports, Indonesia estimates that it is short of rice by at least 6,00,000 tonnes and the Philippines rice shortage is of a similar order. Malaysia is importing 90,000 tonnes, Singapore 25,000 tonnes and Hong Kong 10,000 tonnes. The Asian countries who are expected to have an export surplus (China 6,00,000 tonnes, Pakistan 1,00,000 tonnes, Burma 4,00,000 tonnes and Japan 3,00,000 tonnes) are not members of the Fund. If these countries join the fund, it could become an important regional trade body.

Solar Energy: The Unesco conference on solar energy in Paris in July arrived at some important conclusions in face of the current and future world energy crisis caused by the wayward nature of our oil supplies, dwindling fuel resources and mounting demand. First, solar energy has now reached the stage when it should move from research to production, from researchers to engineers. Second, the further research needed is in two areas—

the efficiency of absorption and the thermal dynamics of heat storage. Third, work must now be undertaken to put a solar collecting station into orbit around the earth comprising a sunshine converter connected to a giant micro wave transmitter beaming energy to terrestrial receiving stations. For India and the developing countries these recommendations are appropriate and both engineering and R & D programmes should be geared at the level of the countries and region to achieve the pointers emanating from the conference.

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II. Agricultural Development

Paddy :

With the good south west monsoon referred to earlier filling the hydel and irrigation reservoirs in the State, particularly Mettur which feeds the Thanjavur-Tiruchy rice bowl and the fall out in the rain fed areas of South Arcot, North Arcot and Chingleput, the kharif paddy prospects are good in the 1.5 lakh acres in the Kanyakumari belt and the 3-4 lakh acres each in the Thanjavur, Madurai and northern belts. Kuruvai paddy now covers 10 lakh acres. Water and power are now adequately available for the crop. HYV seeds are also available, with IR-20, IR-8 and Ponni being the favourites. In Tiruchi district over 1 lakh acres have been sown with Karuna. Credit is also being made available to the farmers, the Tiruchi District Cooperative Central Bank alone disbursing Rs. 750 lakhs as short term loans and the Pudukottai District Cooperative Central Bank providing Rs. 155 lakhs. The major problem for the State is with regard to fertiliser availability. Tamil Nadu is the second highest State in Fertiliser use at 48.81 kg per hectare surpassed only by Punjab at 52.66 kg per acre. There are three facets to the problem of fertilisers in this State. First there is shortage in supply. The seven fertiliser factories in the State supply 60,000 tonnes of nitrogen and 20,000 tonnes of phosphates, with 40,000 tonnes potash to be supplied from the Central pool. This is about half the requirements of 1.2 lakh tonnes of nitrogen and 50,000 tones of phosphates, with the excess being in potash needs of 30,000 tonnes. The rabi needs are 2.5 lakh tonnes. There is need for an increase particularly of nitrogen supply. Second there is the problem of distribution. The Government knows about the black market where a Rs. 30 bag is sold at Rs. 50 the Rs. 50 quality sold at Rs. 80. The Cooperative Societies through which distribution is undertaken need to extend their branches to the farming villages and supply the branches regularly so that the cards held by the farmers for fertilisers can be promptly honoured. Now farmers in some of the Thanjavur and Tiruchi villages complain about their difficulty in getting the fertilisers they are entitled to. The third problem is the unbalanced use of fertilisers by our farmers. This has two dimensions. There is over use of nitrogen by our ryots. The NPK ratio in this State is 6 : 2 : 1, while in Europe and Japan it is 1 : 1 : 1.1 Now the fertiliser mix in the State can be brought down to 4 : 2 : 1 as a first and immediate step to use our fertiliser resources more effectively. Secondly we are going to face shortages in chemical

fertilisers for a long time—throughout the Fifth Plan. Under these conditions, the farming community must be helped to use increasingly organic manure. All our major cities—Madras, Madurai, Coimbatore and all our large towns should turn their composts and refuse into organic manure. In the cities mechanised plants can be used to produce such manure at the rate of 120 tonnes a day. With the Centre's grant of Rs. 8 lakhs this year for the balanced use of fertilisers in North Arcot, South Arcot and Chingleput, the State can embark on producing organic manures in its cities and towns. The soil testing laboratories at Aduturai, Tiruchi and Kancheepuram should be extended at the rate of one in each district as provided in the Fifth Plan and help in making this programme effective in each village. Under these conditions, it is possible for this year's per acre yield of paddy to surpass last year's at 1,219 kg. per acre.

Oil Seeds :

Groundnut sowing in Pollachi, Salem and North Arcot areas cover the same acreage as last year with, it is hoped, better results. In the last kharif season one third of the groundnut crop was lost due to poor rains, despite the fact that the acreage increased to 78,504 acres against the target of 65,000 acres. The oil seed crop in a normal season is 11 lakh tonnes including 9.5 lakh tonnes of groundnut. This year with the good monsoon, the high yielding varieties developed in the Tindivanam and the research station (see Vol. II No. 9 page 19) large scale ground spraying like last year (see Vol. II No. 10 page 19) to eradicate the red hairy caterpillar pest, the groundnut and oil seeds yield will be around 12 lakh tonnes. The pesticide ground spraying programme against the red hairy caterpillar pest will cover 1.37 lakh acres of the groundnut crop in the five zones, Madras 50,000 acres, Tiruchi 26,000 acres, Coimbatore 50,000 acres, Madurai 9,000 acres, and Thanjavur 2,000 acres. The high price ruling is a sufficient incentive for an increase in oil seeds output and for financing the pest control programme.

Cash Crops :

The summer cotton crop has been good and the winter crop is expected to be even better. The wilt diseases fungus affecting the Coimbatore region is resulting in replacing the high yielding MCU-5 (see Vol. I No. 5 page 1 and Vol. II No. 2 page 8 of the Bulletin) which is susceptible to the fungus by the Egyptian extra long staple sujata and suvin developed at the IARI station in Coimbatore. 3,000 acres are being planted with these disease resistant varieties. In addition research is under way to evolve a similar fungus resistant MUC-5, to rotate the cotton crop with paddy as a means of eliminating soil infestation and of spraying the infested land with fungus killers. The sugarcane is also expanding this season. It is being grown over an additional 20,000 acres to the 2,82,750 acres sown last season. The sericulture programme referred to in the last issue of the Bulletin (see page 500) is gathering further momentum with the Rs. 4 crore crash programme agreed upon between the Government and the Central Silk Board. The funds are to be expended on sinking of wells and installation of pumpsets to provide assured water for mulberry cultivation, construction of sheds and purchase of equipment and appliance. The plan to set up a Corporation to guide and direct this new cash crop is under consideration of the Government. The market is large within the State, which needs at present 10 lakh kgs of raw silk.

Research results :

Laboratory studies of mixed cropping in some of the Southern soil belts show

important results. Inter-cropping red gram with maize and ragi involving 8 combinations—red gram with green gram, black gram, cow pea, soyabean, hybrid maize, ragi and groundnut—with prescribed fertiliser application yields more seeds and grains and higher income than a single pulse crop. Similarly a new cow pea variety has been developed C-152 with a 90 day maturity and a 13 to 20 quintal yield. This strain is suited to growing as a dry crop and is drought resistant. These demonstration experiments now need to be firmed up and made available to the growers. Coconut trees grown on sandy beaches do not yield well as their roots do not reach the rather low water table in these areas. Experiments have shown that by digging around the tree till the water level is reached, the plant can be lowered to this point and its fruit bearing qualities augmented. Coconut plantations in the State's sea coast might try this method which has been successfully pioneered in Kerala. In relation to the shortage of fertilisers, another experiment now under way is the extraction of manurial supplements from the sea by a process of recycling the nutrients—which is simply treating the salt bitters to remove the residual sodium chloride and other toxic components. The resulting product is equal to an NPK dose of 9:9:9 and gives a higher crop yield when tried on coconut plants, paddy, tapioca and even roses. This form of manure should now be commercialised and popularised with our farmers.

Tea and Coffee :

In July, a new world tea agreement for 1973-74 of exports of 6,57,000 metric tonnes and for 1974-75 of 6,18,000 metric tonnes was established. India's share of this export agreement is 2,17,800 and 2,24,300 metric tonnes followed by Sri Lanka 2,14,200 and 2,20,000 metric tonnes. The price outlook is however depressing internationally. On the one hand world production is going up, reaching the record of 13,87,000 tonnes in 1972 which was 75,000 tonnes more than in 1971. The demand is declining in Western Europe but increasing in Russia, Poland and West Asia and internally in India. It is against this background that the report of the Task Force on tea submitted to the Government should be examined. If press reports are accurate, it recommends the continuation of the present system of tea auctions in which the small producers have no part, it makes no recommendation on closed tea gardens and suggests that an officer look into sick gardens, suggests vesting the chairman of the Tea Board assisted by a committee with development powers and the doubling of foreign promotional expenditure of the Board to Rs. 3 crores. This is good as far as the external factors are concerned, particularly the need for greater promotional efforts as urged in Vol. III page 258 of the Bulletin. But the real problem of the tea industry analysed in this volume (pages 347 and 419) have not been dealt with by the Task Force. They are the rising costs due to the increase in wages and the cost of living allowances. Since April last year, wages in the Tamil Nadu tea gardens have risen by 60 paise which was right, but the rise in other input costs have resulted in a total cost escalation of 100 paise in the last 12 months. And with the price inflation the cost of living automatically increases, making production unprofitable for the small producers. Second the price of tea is falling. In the period January-June 1973 it has fallen by 46 paise per kg. Third the withdrawl of Sudan and ARE from the purchase of common and medium varieties of tea has futher knocked the bottom out of the market. The exhaustion of the rupee credit by these countries have led to their withdrawal and the small producers are forced to sell now

at whatever price is offered to them. A fourth factor affecting the future of the industry is the Government decision abolishing the 50 per cent development allowance on new planting as from 1 April 1974, following abolishing the allowance on replanting from 1 April 1970. This surely was a matter that the Task Force should have examined because there is a very real danger that all development work of the tea gardens in this State and other States will come to a standstill. Under these conditions it is now necessary for the Union Government to take on the four issues facing the industry. It has all the information and analysis required and the one thing that is not needed is another committee.

Unlike tea, the export demand for coffee is expanding. The total quantity of export from 1972-73 crop of 88,148 tonnes was 39,800 tonnes, leaving a balance of 10,200 tonnes to be exported as of June 30. From October 1 there will be no ICO quota regulations and so the Board has entered into forward commitments with all ex-quota countries. In addition there are the non-quota bilateral countries' demand (USSR and East Europe) and the non-bilateral (Japan and West Asia) increasing market. The need to develop continuously the export market as well as the internal market, particularly in the north is to be noted. Instant coffee and branded coffee powder are becoming popular and here if the price and quality can be stabilised, the internal demand can be increased rapidly. The Coffee Board has also received a Union Government welfare grant of Rs. 2.25 lakhs for educational and medical aid to children and dependents of coffee estate workers in this State and Mysore and Kerala. The training and health facilities for the coffee plantation workers in the State is thus being continually upgraded, particularly in the small estates which are 49,000 out of a total of 50,000.

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III. Industrial Development

Salem :

In light of the tight resources position of the Fifth Plan and the approval of Rs. 2,800 crores for the expansion of steel production in the Country during the Plan period, it is necessary to examine the place of stainless steel in the Country's economy. As a consumption item for the manufacturer of domestic utensils, it is a non-essential or luxury item and the Rs. 340 crores investment in it can be questioned. But the demand for stainless steel is essentially an industrial demand—for the dairy industry, for the atomic energy agency's equipment, for reactors, distillation columns, storage tanks of the chemical industry and for petroleum refineries, petro-chemical, organic and inorganic chemical, oil and sugar industries. Its electric steel will be needed by BHEL and other public sector units for the production of electrical equipment. All this is now being imported at high cost. Salem which at the end of the five years will be producing stainless steel sheets using imported hot rolled stock will be meeting a priority need in the Country. The first phase of five years will cost Rs. 50 crores as pointed out in the last issue and the second stage which will then start will

produce the hot roll coil stock (being imported in the first stage) through arc furnaces and subjected to decarbonisation producing steel slabs. It is at this stage that the West German Witten process will have to be purchased, if the project report next year so recommends. What is not clear is whether apart from Rs. 50 crores for the first phase, the Rs. 2,800 crores figure includes work on the second phase (costing Rs. 160 crores) which would enable a start on that phase in the middle of the Fifth Plan. It is important that the agreed schedule for Salem should be kept. The same considerations apply to the two other southern plants—Vishakapatnam and Vijayanagar. In addition to the expansions of Bhilai, Bokaro and TISCO referred to eartier, these two plants should be from the beginning established at a level of 4 million tonnes each—so that by the Sixth Plan at least, the Country can stop spending Rs. 200–235 crores which we are spending this year, and which may well rise to Rs. 400 crores by the Sixth Plan unless these expansions and new plants are established. For Salem the State Government and industrialists arè at work planning the subsidiaries and ancillaries for the steel plant. A 450 acre ancillary industrial estate is being set up in the steel plant site for developing small scale industries. Units are needed to contribute to the construction stage and later to use the product of the plant to meet the varying demand referred to above. It might be useful if the Department of Industry had a cell for liaison with and ancillary unit development in Salem.

Neyveli :

The next stage in the implementation of the second mine cut at Neyveli referred to in the last issue (page 505) was reached in late July when the Union Planning Commission gave its broad approval and allocated Rs. 213 crores as proposed by the Department of Steel and Mines for lignite expansion in the fifth Plan. The project will be discussed again by the Commission with the department next month for final approval. The strength of the second mine out of the NLC is not only in the cost return analysis summarised in the last issue. The thermal plants in this State cannot secure alternative fuel as the coal transport and supply bottleneck this year so clearly demonstrated.

BHEL :

BHEL's good production and management record have been commented on in earlier issues (Vol. III pages 35 and 349). Now it is proposed that it take the lead in ensuring a coordinated and integrated use of the generating equipment it is producing, some of which is lying unused or delayed in use. For this purpose BHEL would have a consultancy service cell which in association with the Union Planning Commission, the Union Ministry of Power and the State Electricity Boards will be associated with every power project for which it is manufacturing equipment from the stage of planning and preparation of project report to the designing, delivery and installation of the equipment. This would get rid of the interminable passing of responsibility from one agency to the other and help in the speedy and technically efficient excution of power generating projects. This technical consultancy service should be supported by the planners and administrators at both the Union and State level. Meanwhile BHEL plans to programme its production schedule to meet all domestic demand and fill in the balance by meeting export orders which are continually expanding.

Surgical Instruments :

The surgical instruments plant has been one of the heavy losers among public

sector undertakings. Its cumulative losses over its eight year existence as of todate amount to Rs. 5 crores against a paid up capital of Rs. 5 crores. It is now picking up. In 1972-73 it produced up to 65 per cent of capacity and plans to reach 75 per cent this year. Designed to produce 2.5 million pieces, it produced 1,70,000 in 1969-70 and now with diversification of production and increased exports, it has produced 6,69,000 pieces. The bulk of its production has been exported Rs. 50 lakhs out of Rs. 68.3 lakhs produced in 1972-73. In fact the Engineering Export Promotion Council of India has accorded recognition to the plant as a top exporter in the non-orthodox category. It recently delivered a trial order of 1,000 pieces to the US in such a manner that a large volume of fresh orders are expected from the Americas. It has a growing orders book. In March 31, 1971 Indian orders were for 3.5 lakh pieces, in March 31, 1973 it rose to 4.5 lakh pieces. The plant has possibilities and should be helped on two fronts by the Union Government. First it should be granted a time subsidy or protection that is granted to all export oriented industries. Second it should produce items with the same technology to balance the gaps in the marketing of surgical instruments. This further diversification will help the plant in time to break even and cease to be a sick child.

Electronics Complex :

The State is a late starter in the development of the electronics industry compared to Maharashtra, Gujarat and West Bengal. The first plans were outlined in Vol. III, pages 188-189. In July the electronics complex as a functional industrial estate in the Adyar technological campus (adjacent to IIT, the Polytechnic, the CSIR Complex) was launched with 22 units out of 45 completed and let, with fifteen of the units producing a variety of electronic goods—electronic recording, temperature controller for chemical plants, industrial thermometers and pyrometers, resistors, hydro meters, car radios, stand by power units, sub units for longer electronic equipment, etc. Three more units are nearing completion and in four work is starting up. These units will make components for specialised instruments, battery eliminators, ferrites, television components, medical electronics etc. TIDCO is housing two of its joint sector projects in the complex and the projects will be engaged in manufacturing TV receivers and precision instruments. Also a quality certification and calibration laboratory is being set up in the area for Rs. 40 lakhs with the help of the Central Department of Electronics. The Central Electronics Engineering Research Institute, Pilani unit will also be setting up a service centre to service the small units in the complex. The production facilities of the complex will make electronic instruments and goods and also act as ancillaries and sub-systems to Bharat Electronic, Electronic Corporation of India, Space Research Organisation and Indian Telephone Industries. The complex's investment covering 30 acres in the Adyar campus is Rs. 65 lakhs by the Government, Rs. 1.5 crores by private and joint sector firms and will be producing around Rs. 7 crores worth of goods and services, employing 1,500 persons including highly skilled engineers and scientists and skilled craftsmen during the Fifth Plan. This is a growing industrial area, particularly suited to small scale activities and the innovative skills of individual scientists and engineers. It also has good export potential.

Kalpakkam :

The Kalpakkam unit is starting a fuel reprocessing plant to extract plutonium from the used fuel elements of the power

plant. In addition a pulse fast reactor to produce high energy neutron pulses is also being installed. The machinery for the two 235 MW units which are being fabricated in the Country is not yet ready for installation. The delay imposed by the power cut is now being made up and cement deliveries are helping in this. It will be in the Fifth Plan that the new research reactor of 100 MW thermal power will be installed. As of now the schedule for power generation, badly needed by the State, is being kept.

Small Industries :

Small industries in the State have suffered particularly from both the power cut and the shortages of raw materials, as pointed out earlier. The 200 brick kilns around Madras including two machanised kilns face a crisis as over 15 lakh bricks have been accumulated—which is 6 months supply—with no demand for them due to cement shortage. Further due to this fall in demand and the power cut, the kilns are working to 10 percent capacity and the mechanised kilns to 25 per cent capacity. The shortage in wood and coal supply has sent the price of coal up by 60 per cent and has led to the bankruptcy of some of the kilns. There is here a more general lesson with regard to policy in the small scale sector. We are proud of the fact that there are 29,000 small units distributed all over the State and that there are 3.2 lakh units in the Country contributing 40 per cent of our industrial production. But this vital sector is on the point of collapse. The power situation is now normalised but during the power cut, with no margin for existence, they had to close down and some were liquidated. In power they should be in the priority category next to defence industries. They should also be given priority in raw materials distribution, in foreign exchange allocation and the financial institutions should be instructed to be involved in equity participation in the units. Unless this kind of policy is consciously adopted by the Union and State Governments, this innovative labour intensive sector will not survive, let alone grow. On the positive side the Coimbatore Cooperative Supermarket which has a good record of service and sales amounting to Rs. 7.28 crores last year, is setting up a sunflower extraction plant at Coimbatore at a cost of Rs. 42 lakhs to meet the shortage of edible oils. Sunflower oil has proved to be popular and widely in demand and this is a real break through in the supply of edible oils. It is also establishing a hosiery unit at a cost of Rs. 1 lakh.

SIPCOT :

The second annual report of SIPCOT marks a considerable progress over its first year's record summarised in Vol. II No. 12 page 29 of the Bulletin. The second year's record was also referred to in Vol. III pages 351-352 of the Bulletin. It reports aiding a total of 38 projects during its second year with direct financial involvement of Rs. 2.32 crores, causing a total investment of Rs. 20 crores. About four fifths of this investment, Rs. 18 crores was in the backward districts of the State. The employment generated by these projects was for 2,500 persons. Rs. 1.08 crores were granted on term loans and Rs. 23.20 lakhs underwriting to 10 projects. 11 projects was assisted with various eligibility certificates to the extent of nearly Rs. 2 crores. Under the outright grant or subsidy scheme 30 projects have been sanctioned for Rs. 20.7 lakhs and 550 applications registered. SIPCOT has completed 15 feasibility studies of which 6 have been taken up for implementation. The growth centres programmes reported in Vol. III page 351 has started well at Ranipet covering 712 acres (and not 12 crores as reported earlier) and a second

centre is now being planned in one of the backward districts. The Ranipet complex will house 20 major industries, 50 medium and 150 small industries and the first units will go into production by June 1974. The industries include chemical plants, engineering industries, a medium sized paper plant and a SIDCO estate for ancillaries. The technical cell of SIPCOT has prepared 15 project profiles for the interested enterpreneurs. It is on activating the dormant letters of intent and licenses that the corporation has not been very successful. Of the 286 such letters of intent only 12 have been activated and turned into projects. The corporation should increasingly become the advisory agent to the Union Government on the issue of such letters so that this kind of long delays and inaction is reduced to the minimum.

Yarn :

July saw the lifting of distribution control in respect of counts up to 35s, the controls over 17s having been lifted in June (see page 506 of the last issue). The price control on all counts, however, still continues and the black market in yarn thrives. This State has 208 mills and 42.47 lakh spindles which is 30.4 per cent and 22.2 per cent of the all India totals. Similarly the monthly production of yarn is 60,000 bales which is 33.3 per cent of the Country's total yarn production. Tamil Nadu's yarn consumption per month is 40,000 bales, which is 22 per cent of all India consumption of 1.8 lakh bales. It has 20 per cent of the Country's handlooms at 5.25 lakhs out of 25 lakhs and 50,000 power looms (authorised and unauthorised) which is 5 per cent of the Country's 4 lakhs. Thus the State is in surplus as far as monthly yarn production (60,000 bales) and consumption (40,000 plus 15,000 bales by composite mills) are concerned. The problem has been the availability of yarn to the handloom and powerloom weavers at reasonable prices. Under the Febuary 1971 yarn pool scheme under which mills were to give the State Government specified quantities of counts of 40s and below at prices fixed by the Textile Commissioner and the voluntary scheme of August 1972 giving the State Government counts of 60s and above at the 6 month January-June 1972 average prices, only 10,000 bales were allotted to the State in 1972 which was ½ of one month's requirements. Hence the State Government entered into an agreement with SIMA in March 1973 under which 4,446 bales were supplied to the decentralized sector at agreed prices (see Vol. III page 261). It was at this stage that the power cut and serious yarn shortage and jump in prices led to the statutory control as from 13 March 1973 of all yarn. As noted in the last two issues (Vol. III, pages 423 and 506), the State was allotted 59,567 bales for four months, March to June and 25,945 bales for July-September and Cooptex was appointed as the sole distributing agent. All controls—not only for counts 17s and 35s but also for 70s, 59s, etc. — are expected to be lifted in August. The problem for the handloom sector is one of prices at which yarn is available to them. The controlled prices themselves show rises ranging around 30-40 per cent between the time of control and end of July for Indian yarn and over 60 per cent for foreign yarn as the following table shows.

PRICE OF COTTON

(prices in Rs. per candy of 350 kg.)

Count	Quality of Cotton	Prices on 1-3-73 (before introduction of yarn control)	Prices on 18-7-73	Differences	% increase over March 73 prices
		Rs.	Rs.	Rs.	
Indigenous					
20s	A.K. 277	2,110	2,750	640	30%
	Y.I.	2,135	2,800	665	31%
	Lakshmi	1,900	2,600	700	37%
	Jayadhar	2,050	2,700	650	32%
	797	1,925	2,650	725	38%
	Average prices	2,024	2,700	676	33%
40s	Co. 4	2,550	3,400	850	33%
	1007	2,675	3,550	675	22%
	Dig Vijay	2,700	3,450	750	28%
	Average prices	2,641	3,400	759	29%
60s	Shankar-4	3,350	5,000	1,650	49%
	MCU. 5 (CBE)	3,150	4,300	1,150	37%
	MCU. 5 (Andhra)	3,100	4,300	1,200	39%
	Average prices	3,200	4,553	1,450	42%
Foreign					
80s	Sudan	4,120	6,730	2,610	63%
100s	Egyptian	5,020	8,213	3,193	64%

The open market rate which is the black market rate is on the average Rs. 50 per bale higher than the above prices. Exporters of handloom goods who obtain allotments at controlled prices and fail to export fabrics are levied a penalty which is about 1/4 of what they get from selling the controlled prices yarn in the black market. Even handloom weavers are involved in these transactions, their identity cards command a premium of Rs. 15 to 20 and a sizeable part of their allotment finds its way into the black market. The cooperative handloom weavers are in a quandry because their present problem is even more the disposal of their huge accumulated stocks rather than availability of, yarn at controlled prices. Under these circumstances the mills in the State wish to sell their yarn in the open market and obtain a minimum share of higher prices. The export effort is also affected because of the higher internal prices and the uncertainty of the export incentives scheme. Some exporters are not negotiating future exports to Australia, Japan and Hong Kong

where the incentives are to be abolished and in the case of UK and US reduced to 5 per cent. The one positive element in this rather bleak picture is that with the resumption of normal production by the mills and the fall in export demand, the supply and price situation should return to normal levels.

Leather :

The confusion and dissatisfaction over the export quota scheme outlined in the last issue (page 508) gathered force in July. Individual tanners and exporters expect a cut of 25 to 30 per cent compared to this best export performance in the recent years. The system allows each tanner and exporter to decide on the best performance for each item of skin and hide and so introduces an element of individual judgement and arbitrariness. The restrictions on the export of hides and skins together with the fall in the demand for such items in UK, Italy and Europe due to large stock purchases last year have also sent prices of raw hides and skins down. The trade association in the State have called the attention of the Union Government to the imminent closure of 300 tanneries and the consequent loss of employment and foreign exchange and have expressed the hope that the export quota system will be revised and simplified. The real solution to this rather depressing situation is the speedy setting up of the Leather Authority which can replace the present ad hoc decisions and take the positive long term and short term measures to develop the industry both internally and as an important export oriented sector.

Private sector reports :

The annual report of the Tirumurti Mills for 1972 shows a good record of output at over Rs. 1.4 crores for the first 9 months compared to Rs. 1.7 crores for all of 1972. Cotton prices were lower in the year and remained at the low level and so the gross profits for the year were double that of 1971 at Rs. 19.9 lakhs. The result is that the company was able to pay off its accumulated loss which stood at 21.45 lakhs in 1970 and increase its dividend three fold to 12 per cent for 1972. The 25 per cent power cut from 1 October affected production to a small extent and the company handed over 50 per cent of its production of count 63s and above to the Government at the regulated price of Rs. 5 per bundle under the voluntary scheme. It is in 1973 that the further cuts in power of 40 per cent and 75 per cent, the pegging of prices of counts of 60s and over at the mix month 1972 average price and for counts 59s and below at the December 1972 price to which reference has been made earlier, together with the increased import duty in foreign cotton from 2.5 to 40 per cent took effect and the effects will be seen in the report to be presented for 1973. The annual report of the Kamala Sugar mills shows set backs and some progress. The production of glucose is at around 50 per cent of capacity due to shortage of raw materials for the industry and the falling demand for its product by the confectionary industry which is also working at 50 per cent capacity. Even so the company was able to pay off its accumulated losses. It has received approval for increasing its capacity to 7,500 tons of liquid glucose and in addition to the milk powder units, its modernisation programme and plan for production of activated carbon and malt extracts as part of its diversification plans are further pluses.

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IV. Education Science and Health

Unrest and admissions in educational institutions :

The opening of the academic year has been a relatively quiet period. All activities of students and parents have been concentrated on securing admission to various courses and colleges with engineering, medicine and agriculture which are strictly rationed being in high demand along with seats in colleges with a reputation and tradition where the demand far exceeds the number of seats. One of the anomalies of the situation in the State and the Country is the knowledge that the educational system is deteriorating and not serving its purpose of either cultural development or employment orientation on the one hand and the very large rush for admissions into these sub standard institutions. In the market when a product like milk or vegetable is spoilt or spoiling, its demand falls to zero rapidly. The tradition and prestige of the educational system is such that this simple law of supply and demand does not operate. Neither students nor parents who are aware of the uselessness of the system and what it imparts are drawing the lessons. The opportunity cost of going to school or college is also low, probably, nil and so it acts as a holding operation for both parents and students. Within the system the admission is made difficult because of the reservation programme which operates in the institution. Social justice demands that educational opportunities be spread to cover the weaker sections of society. From this point of view the reservation of 31 per cent seats for the backward classes and 18 per cent for scheduled castes is an attempt to make the system less elitist. There are, however, a number of problems within this procedure which needs attention. First there is still the problem of equality of educational attainments which is the end aim of the system. The gap between the non-reserved admissions and those reserved is wide. At the post graduate stage it becomes glaring with the first group being 70 to 80 per cent scorers and the reserved group 50-60 per cent. The complaint that the system denies admission to some who are in the 70 to 80 group is wrong because all those in that group can be accommodated within the 51 per cent free selection— unless there are non-academic factors at work in this case also. Second it should be realised that the reservation system in a sense provides the access to those who are at the top of the backward class and scheduled caste group. Here what is needed is to provide education at the lower levels to all in those groups so that there will not emerge a privileged few among these under privileged majority. That is why out of school education of drop outs and functional literacy of adult illiterates are more effective social justice instruments than the school. Finally the reservation system is being operated as a racket as membership is being bought and sold in the black market. It also rigidifies the communal profile of our society and has its influence on teaching appointments and educational administration. The sooner we can replace the ethnic criteria by economic means tests, the more effectively will we move to an open democratic educational system. It will also decrease the use of various recommendations and non academic pulls and influences which plague the admission system and the educational system generally. In July there were four reported incidents in educational institutions. The university examinations in Andhra University were disrupted by students in all college centres and police had to be called in some places to maintain order. The students claimed that they had not had sufficient time to prepare

for the examinations. What made matters worse was the strike of private college teachers who stopped their work for over 4 weeks prior to the examinations to mark their demand for improved service conditions. The service conditions for teachers in some of the private colleges are bad—appointment of temporary staff, frequent dismissals, overloading of teaching and tutorial work—and the remedy lies with the associations of private colleges as suggested in Vol. II No. 10 pages 32-33. The Guindy Engineering College students went on a one day strike demanding changes in the regulations relating to the B. E. Degree semester system Chikkiah College teachers, Erode went on strike to force the management to follow university rules and regulations with regard to teachers' service conditions. This was accepted and the founder and correspondent of the college resigned as a consequence.

Educational reform :

The first M.Ed. course in Madras University has been started at the Avinashilingam Teachers College, Coimbatore. The students and staff of the course can help to initiate the much needed educational research for the State with its feed in and the feed back prospects for the reform of the educational system. An English teachers seminar recommends bifurcating the M.A. English course into a general one for those who are not really interested in the subject but enter it as a means of obtaining an executive post and an intensive course for those who are interested in becoming English teachers and researchers. On the face of it this sounds feasible and will get away from the aggregated LCM approach which is one of the defects of the present system. But in a sense it goes too far and at the same time does not go far enough. It goes too far in that it could become an academic caste system. Surely those who have no real interest in a course should not be admitted to it. It does not go far enough in the sense that if disaggregation is aimed at there must be more diversification to meet the many different tastes and aptitudes of the students. The other recommendations on a comprehensive curriculum, diversified syllabus, change in the pattern of questions to evaluate all aspects of learning, improved library facilities and individual or tutorial emphasis apply to all post-graduate studies and can be carried out even within the present system. However good the changes in curriculum and syllabus, in the end it is the quality of the teacher which counts and on this the universities are not doing enough. The rate at which new colleges are being opened or specialities given recognition should bear some relation not only to the demand by the students which as seen earlier is largely a social demand, but even more to the prospects for appropriate employment and the availability of adequate educational facilities. On the grounds of the employment situation the State Planning Commission has recommended quite flatly that there be no new colleges opened this year and during the Fifth Plan. This, however, has not been accepted and 6 new colleges are being opened this year as reported in Vol. III page 512 (last issue) of the Bulletin. An equally depressing factor is that some of the colleges are not equipped for their function. One city college last year opened the first year B.Sc. Physics course without any laboratory and is starting the second year under the same conditions. Each student is required to do some 60 experiments in each of the first two years and actually will be doing none. Similar improvement of library and laboratory facilities at the school stage are essential and the request of the private schools management association to be allowed to increase the amenities fee from Rs. 5 to Rs. 10 should be granted as well

as their plea for a qualified librarian in all large schools. The Bombay university experiment of allowing 100 science students to use the paddy fields of Aswali as their laboratory is a successful and interesting experiment. The students have initiated the illiterate Adivasi farmers in scientific farming techniques and in the process the students and staff members have obtained some new insights in botany and in the soil sciences. For two years they have been teaching the Japanese method of intensive cultivation, introduced the farmers to costing techniques and started a grain bank to see them through hard times. Farmers have been helped with loans and so freed from money lenders. The results are impressive. The students have gained a deep and practical grasp of their science specialities as it applies to the land and its properties. 4 farmers who in the first year of this programme increased their yield from 250 kg per acre to 2,250 kg per acre were joined by 16 others in the second year and now all the farmers are involved. In the process the students and staff have come up against the opposition of the big farmers as the small and marginal farmers who have been helped are no longer available to them and are under their influence. So larger policy lessons have thus been learned by the academic community. The call of the Minister of Education of this State on the occasion of the celebrations of the Avvai Home in Adyar that revolutionary changes are called for in the education system to encourage originality among students and enable them to get in to jobs might start with innovative programmes like those in Bombay and Kerala (see last issue page 519). Remedying the defective education given after the college is accomplished by the out-of-school programmes. From that point of view the youth corps programme of the State which this year is recruiting 290 graduates should be further expanded using the funds allocated by the State under 5 lakh educated employment scheme. However the condition imposed that they must be absorbed in Government employment makes it impossible to use this resource. The condition itself is wrong first because it goes against the self employment principle and second it degrades the qualification of the student vis a vis the clerical positions, that will be offered to him, if he is to seek Government service. Actually the corps vacancies have attracted 1,200 applicants including a dozen M.As and M.Scs. On the other hand the reported decline in youth and women's clubs in the Country is a negative factor, as these are important instruments of informal education. Youth clubs have declined from 89,165 in 1970-71 to 85,178 in 1971-72 and their membership from 17.2 lakhs to 16.5 lakhs. So too women's clubs have declined from 55,391 with a membership of 13.5 lakhs have declined to 53,675 and 13 lakhs. Similarly, adult literacy centres are 6,41,000 and over 8 years have made 1.7 crore literates against 25 crores who need literacy.

Technical education :

The admissions to the engineering colleges were finalised in July. The demand profile of those applying for admission showed a preference for electronics, mechanical and chemical engineering in that order. Also the best students apply for engineering. This year 4,200 students were interviewed for 1,090 seats. 2,500 of them are first class PUCs, and 1,000 within that number had obtained 100 per cent in Mathematics, 80 to 95 per cent in chemistry and 75+ in physics. This is revealing in so far as examinations are a measure of a student's ability. But the choice is made on the basis of the students total performance in general knowledge, aptitude, sports and cultural pursuits. With regard to the take over of the Regional Engineering College Tiruchy, by

the Union Government, referred to in the last issue of the Bulletin (page 516), the Minister of education has stated that the status of the Tiruchy college should remain unchanged and if there is to be any change the State Government which has contributed its share of capital and recurring costs will be willing to take over the responsibility for the college. This as was pointed out earlier is in line with sound educational theory and practice. One of the recommendations before the Government is the setting up of agricultural polytechnics. The State Planning Commission has proposed one. The agricultural education study committee appointed by Government (see Vol. III page 429) has recommended several polytechnics where high school students can enter and train intensively in agriculture for 3 years and if they desire, continue for 2 more years and get a diploma. The Government must start at least one such polytechnic in order to provide the middle level agricultural technicians that we need and the agricultural teachers needed by the proposed comprehensive schools.

Science :

12 of the 14 working groups of the Tamil Nadu Science and Teehnology perspective plan referred to in the last issue of the Bulletin (see page 523) completed their work by the end of July. The R & D projects developed by them relate to agriculture and allied activities, forestry, animal husbandry, fisheries, irrigation, fuel and power, nutrition, water supply, roads and bridges, management and overall goals. Working groups on industries, minerals, health, education, housing and urban planning finished their R & D project formulation work by the first week of August. The projects are well formulated in accordance with the guidelines and they are being subjected to review and scrutiny with a view to establishing priorities in relation to prospective resources. The National Committee on Scienee and Technology has asked that the projects be phased on the basis of staff availabilities, This is a bottleneck in the plan and one of the tasks is to match the projects where research personnel are available. The main source for the research staff is to be found in the engineering institutions and the CSIR laboratories in the State. About 100 industrial units are using these facilities at present. 30 of them are associated with MERADO and IIT for improvement and innovation of their engineering processes. The Central Leather Research Institute has made available to tanneries and the leather trade a number of processes. The Structural Engineering Research Centre has similarly given the construction industry valuable help. In combatting environment pollution the Central Public Health Engineering Research Institute has made available techniques of waste and sewage disposal. There is a small group of industries—around 20—who have a limited R & D establishment but much of their research is of a routine nature which does not fall in the category of R & D. The plan now under preparation will among others help some of the industries to use their limited R & D resources on innovative processes and help the research institutions to evalute with economic criteria the work that is entrusted to them. The national Science and Technology Plan for the Fifth Plan will be readied by the end of August and will then be fitted into the Fifth Plan. Its emphasis on industrial R & D will be aimed at capacity use and in agricultural R & D the improvement of the production, quality and scientific storage of cereals. The approach to the Plan being finalised by NCST was examined at a seminar in July in Delhi attended by social scientists who pointed out that the priorities and strategies were not sufficiently

aimed at the objective of raising the living levels of the poor majority. It was also suggested that the plan should concentrate on improving existing technologies and using indigenous resources rather than concentrating on imported technologies. The further criticisum that it is conceptually defective because it does not push socialism is a larger issue for which the scientists cannot be held responsible. The CSIR's Fifth Plan proposals calling for Rs. 338 crores are now under review. The plan proposes Rs. 20 crores for 30 new institutes covering paper and pulp teehnology, refrigeration and air conditioning, solar energy, non-ferrous metals, agricultural and agro-engineering machinery, aluminium, welding, tyre research, fibre research, optical glass and refractories. Rs. 71 crores are for new continuing projects in existing laboratories and Rs. 5.25 crores for research centres in NPL, NCL, CEMRO, CSIO, SERC, INDSOC, and 3 other institutes. The plan expenditure in the Rs. 338 crores proposal is Rs. 180 crores, which will in the effect be much less in real terms—computed at Rs. 75 crores. Whatever the final size of the Plan certain general policy issues should be decided now with the help of the Union Planning Commission. One is whether some of the Institutes and R & D projects should not be loeated in the industries themselves. In the case of non-ferrous metals, aluminium, pulp and paper, etc. the pulic sector undertaking is so predominant that locating the R & D institutes in the undertaking should pose no organisational problem. Then the perennial problem of the CSIR laboratories not knowing what their competent industries want and the industries not knowing what the laboratories are doing can be solved. There will be no problem of forging links between the Institutes and industries because they will not be separate. Second, as one of the declared aims of the CSIR's Fifth Plan ism" in certain specified areas to accelerate the process of minimising the import of technology in question" it should follow a very simple rule, of equating the percentage of investment of R&D in a particular line with the percentage of import. For instance, of the annual payment of Rs. 200 crores for royalties, fees, etc. for imported know how, 29 per cent is for engineering goods technology. CSIR's R & D in this line is about 6 per cent. Should it not be doubled in the Fifth Plan and doubled again in the Sixth Plan? On electrical technology, our import payments amount to 11 per cent while CSIR's effort is 4 per cent. Here again the CSIR outlay could be trebled in the Fifth Plan. Unless this link between imported technology and CSIR's R & D efforts is established, the aim to reduce the drain of foreign collaboration, will not be realised. This would mean that CSIR will have to give lower priority to its social priorities—housing, school building, all weather rural roads, etc. They should be carried out by other bodies and by CSIR with small expenditures of its resources. The Rs. 60 crores project for the development housing, roads, sanitation, water supply and survey of natural resources in Karimnagar adopted by CSIR as the first project for the inter action between science and technology (see Vol. II No. 10 pages 28-29 and Vol. III page 429) is a good effort but should not divert the Council from the job only it can do—the development of indigenous technology. This project can be carried by ICAR with some of the Council's laboratories on roads, buildings and foods helping, provided they are not diverted from their main task of (a) adapting imported technology to our conditions and (b) replacing all future imports. The Council's help in the Karimnagar type of project can be restricted to the survey stage. Its main value is to increase the scientific community's awareness of the conditions in our rural country side. The

22 industries which have been chosen—rice and maize milling, oil seeds processing, food industries, paper, etc.—should be implemented by the State Departments concerned. So too should the Rs. 10 crores road project and Rs. 10 crores health project be implemented by the competent departments, with council's laboratories serving as consultants, where necessary. The Fifth Plan terrestrial Television proposal for Rs. 204 crores providing for a countrywide network (see Vol. III page 515) is being reviewed with some scepticism by the Planning Commission in view of the tight resource situation. The Communications satellite proposal (INSAT) for Rs. 56 crores has been approved along lines outlined in the last issue (page 515). The 1975 experiment with SITE will be followed by INSAT with the direct receiving sets for community viewing and software component being developed indigenously at a cost of Rs. 6 crores. The ground systems that it will need cost Rs. 250 crores running into the Sixth Plan. The commission is wrong in taking a short sighted view of the terrestrial TV programme. It is an important and essential development instrument and is part of the programme to lift the living levels of the poor majority.

Health :

The Union Government is planning to set up an All India Institute of Medicine in Bangalore. The Institute which would be the first in the south will have a bed strength of 700 and would be provided with all the specialities. It could help in the development of medical research in which the State and the south generally are lacking.

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V. Employment

The 27 employment exchanges in the State recorded a total of 4,76,234 persons looking for employment as at 31 December 1972. This placed the State in the Fifth highest position in the Country in terms of jobless workers who have registered themselves with the exchanges, following West Bengal 14 lakhs, Bihar 9 lakhs, Uttar Pradesh 8 lakhs and Maharashtra 6 lakhs. The educated unemployed in the registers at that time was 2,10,000 SSLCs, graduates. This is a further correction to the figures referred to in Vol. III page 362 and places Tamil Nadu in the sixth place in the all India picture. For this State at least the basis of these figures is very limited. The exchanges do not cover the rural areas of the State and even in Madras city there is only one exchange for SSLCs and two for graduates. Due to shortage of staff, the exchanges are open for registration for only two or three hours a day and it is a discouraging experience for the young educated person looking for employment even to get himself or herself registered. Further the statistics do not give any quantitative information on the registrants. One science graduate in Madras exchange has been on the register for 6 years and another who has the additional qualification of higher grade shorthand and type writing has been waiting for 4 years A six month period of waiting after graduation is normal. It would be important for employment policy and the current 5 lakh educated employment scheme to ascertain the waiting period for the various groups of educated unemployed. The employment schemes can then be tailored to take account of this factor.

Using the employment exchange returns, the latest information on jobless persons registered in the live registers of the Country shows a worsening trend. As at March 31 there were 73.7 lakhs looking for employment in the Country. The progressive increase may be seen in the fact that it was 69 lakhs in December 1972, and as pointed out in Vol. III page 43, 64.57 lakhs in September 1972, 57 lakhs in June 1972, 51 lakhs in December 1971 and 40.69 lakhs in December 1970. Of the 73.7 lakhs registered on March 31, 1973, 33 lakhs or 48 per cent were educated. In the Fourth Plan we have thus doubled the number of jobless persons registered with our not very comprehensive exchanges. Employment meanwhile is slowly creeping up. Using the employment market information of the Government, covering all public sector establishments and private sector non-agricultural establishments which employ ten or more persons, employment increased from 174.9 lakhs in March 1971 to 179.8 lakhs in March 1972, a rate of growth of 2.4 per cent. The percentage rates of growth in these sectors for the year 1971-72 for the Northern zone was 5.5, the Central zone was 2.1, the North Eastern zone 4.9, the Eastern zone 1.2, the Western zone 1.6, and the Southern zone 4.0. The Union Government by itself employs 29.2 lakh persons in March 1971 and its employment increase was the same 2.4 per cent. The largest employers are the Ministry of Railways (50.9 per cent) followed by the Ministry of Defence—Civilians (17.6 per cent), and Communication (14.3 per cent). About half the employees were on the pay scale of less than Rs. 150 per month. Only 2.5 per cent of all employees were women. One other disturbing statistic is the Expert (Bhagawati) Committee's computation on unemployment that at December 31, 1971, there were 187 lakhs unemployed, including 87 lakhs who were employed for less than 14 hours a week. This is the first official figure that has been released since the Fourth Plan draft, after which no attempt has been made to compute the total unemployment and underemployment in the Country. A committee of secretaries is at work on a programme of implementation of the Bhagawati committee recommendations summarised in Vol. III pages 432-434.

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VI. Other Items

ICSSR Review Committee :

The seventh session of the ICSSR Review Committee met on July 20 and 21 in Madras and July 22 and 23 in Trivandrum. In Madras the Committee met 60 social scientists from Tamil Nadu (except Madurai), Mysore State and Andhra Pradesh and in Trivandrum 40 scientists from Kerala and Madurai and received evidence from them on the factors retarding research in the southern universities and colleges, priorities in their disciplines and means of improving the performance of ICSSR. In both places the committee met the users of research and obtained their views on the reasons for non use of social science research and the priorities that they would suggest. At Trivandrum the committee met the vice-chancellors and registrars and exchanged views on how the universities could promote research by the staff, means of developing inter disciplinary structures within the university system and adaptation of university rules

for the speedy execution of research projects. The committee also examined a series of issues that had been accumulated from those interviews and other evidence with regard to the role and functioning of ICSSR and arrived at conclusions on the autonomy of the council, its financing and funding, the priorities for research promotion and direction during the Fifth Plan, the inter action with other bodies like CSIR, ICMR, ICAR and ICHR and the means of decentralising the functioning of the ICSSR and making its procedures more effective. The committee will be moving at its next session to examining its draft report of analysis and conclusions.

Advisory committee on Area Studies and International Relations:

The ICSSR's Advisory Committee on Asian Research has now been reorganised into the Advisory Committee on Area Studies and International Relations. At its meeting in July, it confirmed its earlier decision to give priority to studies on South and South East Asia and also for the present to include West Asia and US and USSR relations in its priority studies. It discussed and approved a programme for the development of social science research in cross national perspective which will involve cross national studies, bilateral studies, individual studies, training, consultancy and information exchanges at a total cost of Rs. 37 lakhs for the Fifth Plan. This programme will be planned and directed by the committee. It also approved a programme to respond to requests from scientists in their international and area studies programme to the extent of Rs. 60 lakhs for the Fifth Plan. It set aside a sum of Rs. 2 lakhs for a journal on Asian Research to be run by the Council and Rs 20 lakhs for institutional development. It requested the chairman with the help of a small group to work out details for the launching of the journal by July 1974 and for examining the cultural exchange programmes arising from the bilateral Indo-Iranian, Indo-USSR and Indo-Burmese agreements which have been referred to the council by the Government.

Social Science Review Committee of Andhra University, Waltair:

Three of the seven members of the committee met in July with the vice chancellor and Department heads in Andhra University, Waltair to review and recommend the Fifth Plan programme developments in the social sciences (see Vol. III pages 128-129 for committee background). Dr. Ravi Mathai (IIM, Ahmedabad) had visited the University in March and had reviewed the commerce and management education programme. Dr. K. N. Raj and Dr. Gore (who was visiting the university for the second time), reviewed the work of the Economics and Social work departments. The reviews undertaken so far confirm the view that the social science departments of the University are functioning at a high level of academic scholarship and social relevance—probably the highest in the south. On this sound disciplinary basis of excellence, the possibility of the university developing inter disciplinary schools are under the examination of the committee. Dr. Rasheed-ud-Din Khan (Jawaharlal Nehru University, New Delhi), Dr. L. H. Singhvi (Director, Institute of Constitutional and Parliamentary Studies, New Delhi) and Dr. S. P. Adinarayana (Vice-Chancellor of Annamalai University) will be reviewing the department of politics, Law and Psychology in August and Dr. M. N. Srinivas (Institute of Economic and Social Change, Bangalore) the department of Sociology in September. There will be a meeting of the committee in Madras in October to finalise the report for presentation to the university.

Voorhees Colege, Vellore:

On the occasion of its 75th anniversary in July, Voorhees College, Vellore celebrated the opening of its Jubilee Hall by Bishop Newbiggin, and the part of the Hall contributed by its staff and students. Also on that occasion the foundation stone was laid for a new block which is to be called after its first Principal V. P. Adiseshiah. The college which started as an intermediate college with a strength of 150-160 students in the twenties is now a first grade college with a student strength 1,800. It has been granted post graduate affiliation this year and is going forward with a quality improvement programme for its staff and students, thanks to the able and farsighted leadership of its Principal.

Seminar on Plan Implementation:

The Seminar on Plan Implementation has been postponed from September 21 and 22 to October 26 and 27. The Chief Minister has confirmed that he will inaugurate the Seminar on the 26th of October and the Union Minister for Industrial Development Mr. C. Subramaniam will deliver the valedictory address concluding the Seminar on the 27th. The invitees referred to in the last two issues (pages 438 and 524) have been further extended to: 5 panchayat union council chairmen. Thiru S. Agniraju B. A., Chairman, Thiruparankundram Panchayat Union, Madurai District, Thiru P. Nellai Nedumaran, Chairman, Alwarthirunagari Panchayat Union, Tirunelveli District, Thiru R. M. Ramaswamy, Chairman, Rasipuram Panchayat Union, Salem District, Thiru C. C. Viswanathan, M.L.A., Thirukallaikundram Panchayat Union, Chingleput District, Thiru N. Sundaresa Devar, Chairman, Pattukottai Panchayat Union, Thanjavur, Dr. N. Chinnappa of the Madras University and R. Chambers of the Birmingham University. The working papers from Dr. B. Natarajan, Mr. Sivasubramaniam, Dr. Maheswari (see Vol. III pages 438-439) have been received and sent to the press for publication.

August Development Seminar:

The paper for the August Development Seminar, Power in Tamil Nadu, by Mr. M. V. Arunachalam, Director, T.I. Cycles and a summary of the discussion of the paper at the seminar meeting on August 30 under the chairmanship of Dr. P. V. Raj Kumar, Professor and Head of the Department of Economics, Government Arts College, Madras, appears as the first article.

Second Article:

An article, "Aid to Asia—Progress and Priorities"—appears as the second article.

Assesment of the Dharwar Seminar:

The assessment by the Seminar director, Dr. T. K. Meti, of the seminar for Research Supervisors and Guides in Economic Research Methodology held at Dharwar in May-June 1973 appears as the third article.

POWER CRISIS IN THE SOUTHERN REGION

By

MR. M. V. ARUNACHALAM

(Director, T. I. Cycles, Madras)

Our country faced an unprecedented power crisis in almost all the States recently, more than 50 per cent in some States and the shortage continues in some, though not severely. The present demand for electricity amounts to more than 200 million units per day, with an installed capacity of 20 million kilo watts on an all India basis. Yet, in recent months we were able to generate around 165 million units per day only, leaving a short fall of 35 million units per day. The region-wise shortage amounted to: Northern — 7.5 million units, Western — 6.5 million units, Southern — 16 million and Eastern — 5 million units.

In a fast developing country like ours where great efforts are made to raise the standard of living of the vast majority of poor people, we need more production which in turn requires more power. Power is the prime factor to be basically planned for in any programme of economic development, industrial or agricultural and has to be produced from all available energy resources. Here, it might be of interest to note that our per capita consumption was 18 units in the fifties, 90 units in the seventies and it is expected to go beyond 250 units by the turn of the century. The United States with 6 per cent of the world population is estimated to consume 34 per cent of the total energy. Asia, with a share of 28 per cent in the population, consumes hardly 3 per cent of the world energy supplies. Our power generation is less than one per cent of world generation and corresponds to the quantity currently generated in a small country like Switzerland.

A point to consider is the availability of energy resources in India. We are fortunate in having large and accessible coal reserves. Most of the reserves are concentrated in Bihar, and Bengal amounting to 56 per cent of coal reserves and 25 per cent in Madhya Pradesh. Our known coal reserves are estimated at 108,000 million tonnes and the bulk of it is poor in quality and are bound to be the main source of energy for the next two decades. The water power is estimated at 41 million kilo watts and the bulk of it has yet to be exploited. We have to take note also of the fact that we have got adequate sources of Uranium and Thorium in the monazite sands of Kerala, probably the largest in the world and these can sustain our power needs. It is upto us to exploit these gifts of nature to the maximum extent to ensure a better standard of living for our people.

There must be a constant search for the exploitation of new sources of energy such as, Solar energy, tidal waves, geo-thermal, wind, power, etc.

Solar energy could be exploited in India, for the availability of sunlight is nearly for 250 to 300 days in a year. It is said that solar energy amounts to one kilo watt per square metre We hear about one novel way of using solar energy by exploiting the temperature gradient of sea water, between the warm surface water and the cold deep water, being tried out in U.S.A. A recent news item informs us that on a hot patch desert in Mexico, the energy needs of nearly half a million people are being met without the use of gas, oil or coal and with

virtually no pollution problem. This energy is geo-thermal-steam at 675°C trapped at 7500 feet below and channelled to the surface to run turbines. Hydrogen as a source of energy is also being developed. Techniques like magneto hydro-dynamic generation where high conversion efficiency is obtained are also being tried. Such researches are necessary in view of the fast depletion of fossil fuel.

We can make a critical analysis for the causes of the present crisis which in turn, will help us to solve the problem in a rational manner.

One of the main reasons for the present situation seems to be a fault in the planning stage itself which means a fault, years ago. While the demand for power was anticipated to double over a period of ten years, the actual doubling occurred within five years leaving the planners years behind. This means we have to double our present capacity of 20 million kilo watts to 40 million kilo watts within a period of 5 years to avoid a more serious situation later. In fact, we have to plan for our needs even further ahead, since the gestation period for putting up a power plant itself is very much more than five years. All these need heavy capital investment. For doubling the present generating capacity from the present 20 million K.W. to 40 million K.W. an investment of more than 6000 crores of rupees is required on power generation alone and about 2000 crores on transmission and distribution. Funds for these should be raised in a suitable manner and projects completed in time for the prosperity of one and all.

The other main reason for the present situation is the failure of the monsoon. A short fall of 24 million units per day could be attributed to the hydel reservoirs not being filled up Though the ratio of hydel to thermal stations is 45 per cent to 55 percent on an all India basis, the Southern grid has a higher ratio of hydel stations with Kerala and Mysore basically hydel and Tamil Nadu with 60 per cent and Andhra Pradesh with 45 per cent of hydel stations. The reservoirs of these stations get filled up during the South West monsoon which is active from June to September.

There was also a short-fall in achieving targets of planned projects. Accumulated spill over from each five year plan aggravated the situation. There was an inordinate delay in the clearance of projects and abnormal delay in the completion of planned projects. The main delay in sticking to the time schedules was the lack of basic infrastructure, shortage of steel, cement and other equipment.

Also, thermal power stations could not operate at their maximum generating capacity due to many factors. There were technical and other snags. Maintenance of these stations was also not upto the mark, due to lack of trained personnel. These led to a low output compared to their installed capacity and their output per megawatt of installed capacity was low compared to that in developed countries. During the past, the minimum availability of 6000 hours per year is not being obtained in various thermal power stations. Apart from the reasons already mentioned, spares, fuel availability, inadequate provision of auxiliaries etc. restricted the operation of steam stations. Also, thermal engineers and technicians were not provided incentives and hence there was a flight of talent.

In short, the power shortage is the cumulative result of faulty planning, insufficient investment on power projects, failure of monsoon, delay in the clearance of projects, inept working of existing power projects, rapid growth of industries without proper development of infra-

structure facilities, lack of trained personnel apart from the low emoluments and incentives to the existing personnel, etc. Also, fuel availability rather than shortage restricted the utilisation of the thermal plants.

The manufacture of power plant equipment should also be increased and till such time imports on power equipments should not be curtailed. The present trend is to go in for plants of higher capacity and sets of 500 M.W. capacity might become economically viable units, since they have higher thermal efficiency and cost per unit of electricity is less. Turbine generator units of capacities approaching 500 M.W. already serve in highly industrialised areas in the world. Moreover, a significant number of utility units in the range of 600 to 1000 M.W. are currently under design and construction. This trend to higher capacity single generating units which is a function only of increased power usage and the economic advantage inherent with large units, has been tremendously accelerated by system inter-connection. Incidentally Indian manufacturers of thermo-mechanical equipment should also develop experitise not only in the manufacture of equipment but also in satisfactory erection, testing, operation and maintenance of equipment. This will help Electricity Boards to a large extent in operation of their stations at the highest standards.

Formation of the Southern grid is a welcome move. The natural resources are not uniformly distributed all over the country. That is why, it is desirable to install a network of transmission lines as a grid to carry power, wherever the power demand is, irrespective of the location of the sources of power. This is the genesis of the implementation of regional grids to be super imposed over the State grids. But, fruits of the Southern grid could not be reaped during the present crisis since the States which form the Southern grid, namely, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu each faced a shortage of power. The Southern grid will be of much help however when all the States of the grid do not face crises at the same time. Formation of regional grids besides providing firm power, reduces overall cost of electricity, ultimately leading to uniform tariff for power. This will pave the way for the uniform growth of industries in various States forming the power generation pool.

Having faced this situation, we have to take remedial action for the prevention of similar crisis in the future. For this, we can devise immediate measures, short term measures and long term measures. Immediate measures mainly alleviate the innumerable sufferings which have to be borne during a power crisis.

First step would then be to distribute the available power rationally. This involves fixing quotas for each sector. A critical approach should be taken to fix power quota. For instance, essential sectors invariably have their own standby generating sets and hence, they too can take a power cut without much difficulsy.

The second step would be to reduce the wastage of electricity. Unproductive use of electricity should be restricted to minimum. Also, alternate energy sources could be substituted such as oil, etc. for heating purposes.

The third step would be to generate electricity by installing diesel sets by industries themselves to augment their power needs and this would help small and medium industries. In lower capacities, diesel sets are readily available and are of low capital cost although their running cost is high due to the high cost of diesel oil. In many cases, the prime mover itself can be converted to a diesel engine.

In plant by-product generation can be exploited to the fullest extent by using gas turbines, back pressure turbines, etc., wherever possible. These systems are not only economical but also save fuel.

One has to bear in mind the long gestation periods of putting up power stations and to avoid delay, plants can be imported to give quicker relief. Here we can take note of the use of gas turbines which are highly compact and are available in ranges upto 80 M.W. Existing projects can be speeded up to give the much needed relief.

More important is the coordinated operation of the system with a judicious mix of hydel, thermal and nuclear plants to give the most economical operation, when power is plentiful and optimum use of these plants when it becomes scarce. To this end Southern grid will be of much help. Thermal stations can be operated to the maximum extent storing water in hydel areas.

There is a need for establishing super thermal plants for augmenting power resources. Power potential available from hydel generation is currently subject to severe fluctuations depending on monsoon in catchment areas and therefore, needs to be firmed up by thermal stations. Massive projects like Iddikki (Kerala) and Kalanidi (Mysore) hydro power schemes, now in progress, will increase hydro potential of the Southern grid. Andhra Pradesh is served by the two main rivers Godavari and Krishna which are not fully utilised and all efforts are to be made to exploit them fully. Similarly in Mysore, Tungabathdra and Cauvery could be harnessed to the maximum extent. Kerala has undulating land and the rivers flowing West provide ample facilities to generate economically hydro electric power. Tamil Nadu has almost exhausted her hydro sources. These hydel stations can be firmed up by adding a good deal of thermal capacity and construction of pit head stations at Kothagudem and Ramagundam. In Tamil Nadu coal transport and availability might pose problems and Nuclear power stations would provide a solution. Thermal plants can also be located at strategic locations such as Tuticorin where coal can be borne by sea from the Bengal region. Also the lignite deposits at Neyveli should be developed by increasing output at Neyveli. Hence, the emphasis on the pattern of power generation based on the available resources in the Southern Zone will be :

(a) Hydel and conventional thermal for Andhra Pradesh

(b) Hydel for Mysore and Kerala

(c) Thermal and Nuclear for Tamil Nadu.

However possible short-term and long-term measures to overcome the present Power Crisis, particularly in the Southern Region, should be undertaken as a matter of high priority.

The Task Force on "Fuel and Power" of the State Planning Commission, Tamil Nadu has presented a report. It has made recommendations regarding the set up of of Thermal, Nuclear and Hydro generating capacity. Many of those projects will necessarily take a considerable time to implement. We also have to find very substantial resources for the implementation of these projects. In the matter of Power, however, one may say, the question is not "can we afford to", but "can we afford not to". The task Force's major recommendations are :

The Perspective Plan for the development of energy resources should aim at self sufficiency in power generation as prospects of inter-state cooperation are not very encouraging.

1. The additional hydro-electric resources estimated at 2270 MW, comprising of small projects, a few inter-state river projects and pumped storage projects should be taken up for execution as early as possible,

2. During the Fifth Plan (1974-79) two or three thermal plants with a total capacity of 600 MW should be installed even if coal has to be imported from outside the State and constraints eliminated in consultation with Central ministries concerned.

3. Neyveli Thermal Station is not working to capacity as the supply of lignite is insufficient. A second mine cut should be urged to ensure full use of the installed capacity of 600 MW.

4. Intensive development of nuclear power should be given priority in the Sixth Plan. The cost per unit of nuclear generation is lower than the unit cost of thermal energy. Further, expansion of nuclear capacity will mean avoidance of investment on transport and increased dependence on import of coal.

5. The optimum energy generation mix for the State should be worked out through a computer programme study. This exercise is expected to reduce costs of generation and may be useful in establishing a case for expansion of nuclear power generation.

6. The distribution of energy can be undertaken by three or four regional corporations leaving the State Electricity Board free to concentrate on the execution of new generation projects and expansion of transmission facilities. The rate of development in this area has been slow in the Fourth Plan and a special effort is required.

7. Rural Electrification expansion specially in increasing the number connections given to pump sets should be carried out with reference to the availability of ground water.

8. If, owing to resource constraints, the Centre cannot immediately proceed with additional projects possibilities of joint Centre State financing should be investigated.

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Summary of Discussion

In the discussion of the paper at the Seminar in the Seminar room at the Madras Institute of Development Studies on August 30th under the Chairmanship of Dr. P. V. Raj Kumar, Professor and Head of the Department of Economics, Government Arts College, Madras, Mr. M. V. Arunachalam in presenting the paper stated that it was not a detailed review of the Tamil Nadu Planning Commission Task Force Report on Fuel and Power, but a general survey of the power situation in the State and policy planning and feasibility considerations. Recent developments were the decision against further development of nuclear power and the emphasis on the Regional grid. The issues involved in planning for power were 'Short Term' and 'Long Term'. The approach to the former had to take into account the shortfall in achievements of the targets in production of power in each

one of our plans—these being of the order of 20%, 36%, 35% and 37% for the first, second, third and fourth plans respectively. The second feature is the increasing shortage of coal, which makes any plan to increase thermal generation difficult to achieve. He felt that the recent nationalisation of coal mines had led to a fall in production and further deterioration in the supply position. Existing nuclear plants in other States have run into a series of shut downs, rendering power supply variable. The project at Kalpakkam is also well behind schedule. In planning for expansion of energy capacities the complex technological problems faced by the existing nuclear power stations and accidents like the fire at Ennore Thermal Station, which resulted in serious damage to a transformer, are further checks. Exploring the possibilities for geothermal energy and back pressure turbines are long range projects and did not have a bearing on immediate energy generation programmes.

Planning for increased generation of power load had so far depended upon targets based on needs rather than on feasible technology and know-how. Schemes for further augmentation of energy supply, particularly to industry, should be based on the manufacture of 110 to 200 M.W. generators on which we have the know how rather than importing or trying to produce higher capacity equipment which is hazardous. Moreover moving into the field of manufacture of sets of 500 M.W. and above is still in the area of R and D. A view was expressed that the fall in the output of coal was coincident with nationalisation. 80% of coal production is from a few mines and improving their output is not difficult. Problems of shortage and distribution were further aggravated by absence of coordination among the numerous bodies concerned, notably the Ministries of Power, Mines, Shipping, Railways and Public Works.

Yet another factor delaying the Commission of new units is the lagging of construction schedules, while equipment has been delivered and is awaiting installation.

A more technical issue raised was the problem of transmission loss which was as high as 18% in Tamil Nadu. To reduce this materially, it was necessary to analyse losses at various stages and devise suitable technical measures. Provision is made in the Fifth Plan for this purpose. A related problem was that of pilferage, particularly in the area of rural electrification. Adequate supervision can act as a deterrent.

The feasibility of distribution through Regional grids and the formation of a Central electricity authority were discussed. The pattern of exchange—barter of electricity for cement and rice between Tamil Nadu and Kerala and yarn for electricity between Tamil Nadu and Maharashtra—had already rendered Regional Cooperation a convincing arrangement and a base for the formation of an inter-State Regional grid. It was felt that a Central electricity authority would create problems of management and Regional authorities have definite advantages. The State Planning Commission's Task Force is wrong in planning for State self sufficiency in power. This is a chimera. What all have accepted is that power should be planned as a regional programme.

A query was raised with reference to the mechanism of estimating energy requirements for Tamil Nadu and setting plan targets. The procedure followed in the Task Force Report is a computation of anticipated demand based on per capita consumption in KW hrs, on growth rates based on past trends and programmes and regression estimates. In this context a

doubt was expressed whether this procedure would lead to an accurate forecast. In any event the demand for energy is an expanding one and if present trends continued, the energy generated could be fully utilised.

As a long term policy the potential contribution of Solar energy could not be ignored, although the required technology for large scale use has yet to be developed.

Suggestions were made for more rationalised use of energy and improved management of existing resources. Industries could be encouraged to work night shifts to take advantage of the low night load in Tamil Nadu. An alternative to a possible power cut later in the year is to close the electricity intensive industries in the State for three months in the year as in Switzerland, after making needed adjustments in production schedules. Further expansion of hydel power has to be explored to keep the State's power position comfortable. As regards thermal power generation, the second mine cut has already been sanctioned for Neyveli. Supplies to Tuticorin and Mettur Thermal Stations which would have to depend on coal transported from outside the State could be materially improved by arranging its transport by sea.

The generation of power and its proper utilisation is a crucial input in a developing economy. Progress over all sectors of the economy depends upon the proper use of this resource. The Task Force Report provides a useful base for the organised development in this sector except with regard to its approach on the regional dimension of our power programme.

AID TO ASIA: PROGRESS AND PRIORITIES

Progress :

1. There is a clear definition today of what is meant by aid. The 1972 OECD review, Development Cooperation, opens with this rather important clarification (which, however, gets blurred in its Chapter II where it reverts to the confusing concept of flow of financial resources). Its opening declaration is: "the most important measure of financial help extended by developed countries to developing countries is that of net disbursements of official development assistance (ODA). These are funds made available by governments as grants or as loans at concessional terms, primarily for development purposes. These flows are the only one which deserve to be called "aid" or "assistance".[1] Aid to Asia, so defined, has been increasing at current prices from the 16 DAC countries from $ 2.7 billions in 1969, to $ 2.8 billions in 1970 on to $ 3.2 billions in 1971. To this should be added multilateral aid to Asia which for the 3 years amounted to $ 420 millions, $ 390 millions (due to the drying up of IDA) and $ 600 millions.[2] This monetary flow to Asian countries comprises a number of aid elements which should be identified:

grants both bilateral and multilateral which to the extent of 20 per cent finances technical assistance for sending experts and receiving students (I am a case in point), to the extent of 14 per cent provides food aid and the remaining 24 per cent for other purposes, constitute about 60 per cent of the aid.

—concessional loans wherein the grace period and the sub market interest rate during that period constitute aid. The grace period for loan repayment has been around 30 years and the average interest rate 3 per cent. Such loans constitute about 40 per cent of the aid to Asia and are aimed at financing capital projects (15 per cent) general development (15 per cent) and economic infrastructure (10 per cent).[3]

In this definition of aid all private investments—direct, portfolio, and export credits—are excluded and rightly so. Australia is a large importer of US and European capital but this does not constitute aid to Australia. Recently a large export credit was granted by the US to the Soviet Union and is not regarded as aid from one to the other. A corollary of this definition of aid is that it involves an element of sacrifice by the donor. Where that is absent and there is a reverse flow, it is not aid but good business.

2. There is a clearer recognition of the growing gap between performance and pledges in the aid field—and this comment applies to the overall relations between the developed and developing countries—and not only to the Asian aid area. In the International Development strategy for the Second Development Decade, the developed countries stated that by 1975 their ODA (which is what we mean by aid) will amount to 0.7 per cent of their gross national products. By 1971 the ODA

* Extracts from a paper presented by Dr. Malcolm S. Adiseshiah on 15th August 1973 at the ANZAAS Congress held in Perth (Australia) from 13th to 17th August 1973.

(1) Development Cooperation. 1972 review P. 11 OECD Dec. 1972.

(2) ibid table 20 p. 240.

(3) ibid pp. 46–47.

reached 0.35 per cent of their GNP (the US went up from 0.31 per cent in 1970 to 0.32 per cent in 1971 and the other DAC members from 0.37 per cent to 0.38 per cent.[4] To this should be added Asia's share of aid from the socialist countries. The UN reports that Soviet aid was $791 million in 1971 and $659 million in 1972. China's was $492 million and $287 million and the 8 East European countries average $723 million each year. To return of aid from DAC countries, on the basis GNP growth estimates, budget debates, aid policy statements and the long time period between authorisation and disbursement, the World Bank has projected ODA flows as a percentage of GNP for the further four years 1972–1175 thus :[5]

	1970	*1971*	*1972*	*1973*	*1974*	*1975*
Australia	0.59	.52	.59	.59	.59	.60
Austria	.13	.06	.17	.19	.22	.25
Belgium	.48	.49	.54	.58	.62	.66
Canada	.42	.37	.42	.44	.45	.47
Denmark	.38	.43	.48	.53	.58	.64
France	.68	.68	.65	.65	.65	.65
Germany	.32	.34	.33	.36	.36	.38
Italy	.16	.17	.16	.16	.16	.16
Japan	.23	.23	.28	.32	.36	.40
Netherlands	.63	.60	.70	.74	.76	.78
Norway	.32	.33	.47	.56	.67	.75
Portugal	.61	.75	.45	.45	.45	.45
Sweden	.36	.45	.50	.56	.65	.71
Switzerland	.15	.12	.22	.26	.30	.32
U.K.	.37	.41	.41	.41	.45	.46
U.S.	.31	.32	.30	.28	.26	.24
Average	.34	.35	.36	.36	.36	.37

(4) Ibid p. 47.

(5) Robert S. Mcnamars : One hundred countries–Two Billion Peoples p. 73. Praeger Publishers, New York, 1973.

This means, that 3 countries, Netherlands, Norway and Sweden, will perform in accordance with the pledge, and four others—Australia, Belgium, Denmark and France—will be near to their pledge. This situation must be corrected and it can. These 16 countries in 1970 had a combined GNP of $2000 billion. In another paper submitted to the Congress[6]. I have estimated that this will increase to $3000 billion in 1980 at 1970 prices. To provide the 0.7 per cent in ODA, these countries will have to give 1.5 per cent of their increased GNPs to the developing countries, including those of Asia.

3. There is a hetter understanding of the debt burden of the Asian countries. This is not to say that there is any sign of a concerted policy of debt relief, as is pointed out in the latest report of the United Nations Committee of Development Planning. The total outstanding debt of Asian countries on 31 December 1971 was $23 billion. Their total export receipts for 1971 out of which this debt has to be serviced was $15 million. As I am writing these notes, the World Bank announces that the June meeting of the Aid India Consortium ensures that for 1973-74 India's total aid disbursement will be $980 million. Her debt repayment obligations for that year amounted to $720 million, leaving a net aid of $260 million. The aid disbursement figure includes $ 160 million in debt relief without which the net aid to India for this year would be around $80 million[7]. For many Asian countries, the total debt burden and the repayment obligations have passed the safety point—which is a maximum 15 per cent of their export earnings. The serious cases of such large debt at the end of 1971 were $7934 millions (India), $3042 millions (Indonesia), $2096 millions (South Korea), $2917 millions (Pakistan), and $911 millions (Philippines).[8] Not only only is the absolute amount of indebtedness a cause for concern, the trend is equally disquieting. Since mid - 1950 it has been growing at 14 per cent a year and the servicing of this debt has increased by 18 per cent in 1970 and 20 per cent in 1971. As for the future, the Pearson Commission report warns that if the flow of new lending remains at current levels, the Asian countries by 1977 will be transferring to the developed countries as much of their export earning resources as they receive in loans. (By 1977 the debt servicing as percentage of gross lending will be 134 for East Asia and 97 for South and West Asia). This also means that the average rate of increase of debt servicing for the last decade and a half has been over double that of the growth rate of their export earnings which is the source from which all repayment obligations are met. And that is the third element in the debt burden situation which has also become clear. That is, while the greater part of the loans given to the Asian countries have been tied loans (vide the Pearson Commission's comment, 'untied aid in the sixties is the exception and not the rule'), their repayment out of the export earnings means that developed countries are repaid in free foreign exchange. Such tying of loans, involving purchasing specific goods (as additional to normal imports) and at given prices in the lending countries, using that country's shipping insurance services etc., has decreased the direct value of the loans by 20 per cent and their indirect value by a larger amount.[9] The repayment has, how-

(6) Malcolm S. Adiseshiah : Clash of Value p. 9
45 Anzaas Congress, Perth

(7) The Hindu, June 24 p. 7 Madras, 1973.

(8) Development Cooperation 1972 Review pp 80-84 OECD Paris

(9) Partners in Development pp 73-75, 172-176. Praeger Publications, New York 1969.

ever, to be in the full nominal value of the loan and its interest, from the country's export earnings. Progress for the future lies in untying aid, increasing programme rather than project aid and the development of a concerted policy of debt relief to the Asian countries—particularly the five referred to earlier.

4. There is a sharper focussing on the stakes in the area of international trade, arising from inadequate action to help Asian countries gain access to export markets and the current posture in the trade and monetary negotiations which means that their interests are being bypassed. There are several factors here. There has been a steep decline in guaranteed private export credits in South Asia from $ 177 millions in 1968 to $ 101 millions in 1969, $ 28.4 millions in 1970 on to minus $32 millions in 1971. Second there is a kind of permanent trade balance in favour of the developed countries - which OECD computes at $ 9.6 billion for 1968-70 for the non-oil producing developing countries.[10] Third the agreed GSP has not been generally put into operation by the developed countries. Within the enlargement of the common market, the increased trade between its members works to the detriment of Asian producers and exporters. Whether it be tea, rubber, sugar of coffee whose inelastic demand and price fluctuations affect seriously major Asian economies, or the tariff and non-tariff barriers imposed on the export into the developed countries of textiles, leather goods, food products, engineering goods manufactured by the developing countries, Asian exports today are stagnating, or in some cases are on the decline. Fourth the latest UNCTAD report points out that the share of the developing countries in world shipping tonnage has declined from 6.3 per cent in 1970 to 5.5 per cent in 1972, while the sharp increases in the 1971 freight rates unrelated to any cost push factor have operated against Asian trade with both the developed and developing countries.[11] I referred to the stakes of the Asian countries in expanding their trade - the stakes referring to the priorities in their development which is my second theme. From this point of view, apart from some import of capital goods, aid can become, probably has become, a soft option to the imperative of enabling the Asian countries to expand their export earnings in order to help them meet their development priorities without possible distortions, offset ODA short falls and service their debt charges within the safety limits which economic text books detail. Thus in addition to developing commodity agreements and the developed countries extending to the Asian countries the generalised non-reciprocal scheme of preferences, the coming GATT negotiations should specifically provide for an increase in the exports of the Asian and developing countries.

5. Finally some progress is being registered in the whole area of the reason for aid. Whatever the origins of aid, its motivation has been bedevilled by a confusing and sometimes conflicting set of reasons. It has been justified as the extension of the foreign policy of a country, as part of the defence strategy and security of the nation, as a means of warding off an ideology, communism or capitalism as an instrument for preventing explosive conflicts within a country, and as the means of promoting growth and development which will provide export markets to

(10) pp. 188-200.

(11) UNCTAD—Report p. 52 New York 1973.

the country.[12] It has been attacked as being a give away programme, as having little to do with economic development or military security, as being a means of intervening in internal affairs of other countries, as distributing the aid burden unfairly as between the developed countries and as being an instrument of keeping and pampering corrupt oligarchies in power in the developing countries. Some part of this may be a reversed generosity, in the case of the US what has been termed "a strange suspicion on the part of the American people of their own generous motives, a slightly perverted element of their puritan tradition"[13]. The issues have thus been clearly set forth and my own views on the basis of aid have been published by UNESCO.[14] I believe that the only reason for aid is one of justice–the compensation by the rich of the poor, the resource transfers needed to end the lot of the discriminated and the downtrodden. I also believe that the only basis of aid is moral – the qualities of sharing and sacrifice ingrained in all of us.

Priorities :

In this section I shall deal briefly with the priorities for Asian development, and not with Aid priorities for Asia. Asian aid priorities must however follow and flow from Asian development priorities.

1. The first priority for Asian development is a frontal attack against poverty. We have defined poverty in Asia as meaning consuming less than 2400 calories per person per day and/or spending less than Rupees 500 per person per annum in India and equivalent sums in other Asian countries. On this basis we have computed that around 60 per cent of our people are living below the poverty line - a rather higher percentage in our urban agglomerations and lower in our villages. We have found that the percolation theory of growth does not work in our countries. Like so many other socio-economic doctrines, the catch all phrase, other things being equal, hides its basic assumption, that it can and does work in societies with high per capita incomes ($ 1000 and above) and where there are no dual economies. In Asia the 3.5 per cent compound rate of growth that we experienced during the sixties increased the incomes of the top 3 deciles of our population and left the bottom 6 deciles where they were. Our priority is therefore to increase the consumption means of the most needy - the bottom 3 deciles. This involves improving their employment and increasing their incomes, subsidising the wage goods they consume - cereals, edible oil, kerosene, sugar, standard cloth and making available to them the package of primary and adult education, basic health services, drinking water and minimum housing facilities and most difficult of all (as the national cake is limited) imposing consumption restraints on the urban and rural rich. This multi-

(12) Charles Wolf : Foreign aid : Theory and Practice in Southern Asia p. 13—Praeger, New York, 1960 Foreign Aid programmes U.S Senate pp. iii and 20–Washington 1957.
The Scope and Distribution of US Military and Economic Assistance—Washington 1963.
Jeanneney Report P. 43 Paris 1963. White paper (CMND 947 and 2147) London 1963

(13) Milton Friedman : Foreign Economic Aid—The Yale Review 1985 Edward C. Banfield: American Foreign Aid Doctrines—Praeger 1963
Eugene Staley—The future of underdeveloped countries pp 362-370 Harper & Rowe London 1968
J. William Fullerright—The Arrogance of Power pp. 238–250 Janorthan Cape 1967.
Gunnar Myrdal—The Challange of World Poverty p. 331 Penguir 1970.

(14) Malcolm S. Adiseshiah : Let my country Awake pp. 42–48: Unesco: Paris: 1970.

pronged effort to reduce poverty thus involves a fiscal policy which will transfer resources from the rich to subsidise the prices of goods for the poor, a production policy which will divert investment into lines which will turn out massive quantities of essential goods (consumed by the poor majority), an agrarian policy which will both limit the area of land ownership*, secure tenancy rights, guarantee living wages to the mass of agricultural labourers and promote improved rainfed farming practices, an employment policy which will increase employment and incomes and a sumptuary policy which will limit and gradually eliminate all forms of conspicuous consumption.

Our secound priority is to combat our growing unemployment and underemployment. In some of the Asian countries these have grown to such proportions that we have stopped counting our unemployed (we have never had a quantification of our underemployed or what our Plan documents call our thinly employed). Even with regard to educated unemployment which is more manageable in terms of organising the data, we have come to rely on our decennial census and the live registers of our employment exchanges. The census is not meant to provide information on the employment profile of the country and so embodies discontinuities in such elemental matters as labour participation. The employment exchanges do not cover our rural areas where we have a sizeable educated unemployed force and not all the urban educated who register are necessarily unemployed. Within these limits, our problem of unemployment is massive enough, ranging from 8-10 per cent of the labour force, with about half the rural labour force underemployed. Such limited surveys and indicators that are available show that the unemployment trend since 1968 has been on the increase As for the educated unemployed in one Asian Country, India, the number of matriculates upto Ph.Ds seeking employment and registered with employment exchanges rose from 9,17,000 in 1966 to 1.08 million in 1967, 1.3 million in 1969, 1.5 million in 1968, 1.7 million in 1970, 2.2 million in 1971, 2.6 million in 1972 and now stands at 3.2 millions. Hence all Asian countries have built into their annual and 5 year plans, employment generating programmes on a crash and short term basis, for small and marginal farming, dry and drought prone farming labour intensive agro and small scale industries and special programmes to employ the educated unemployed, including new and expanding forms of self-employment.

The employment problem involves however action not only on the demand side—with can produce immediate results. It also calls for action on the supply side in order to deal with the strength of the labour force at the start of the twenty-first century. Nothing can stop the current entry of 1,20,000 workers per week into the labour force in India but if the population increase is not contained and reversed, in 2001 that country will have to find 2,00,000 jobs a week. This is the major urgency of the population control and family planning programmes involving use of conventional and non-conventional contraceptives, sterilisation and abortions in the Asian countries, which aim at reducing their current annual population increase of 2.5 per cent to 1 per cent by the end of the century. Within this employment priority is also the priority of educational restructuration and renovation. India, Indonesia, Pakistan, Bangla Desh and Ceylon are engaged in massive programmes of providing their educated

* The current agrarian situation in one Asian Country is typical. Of the aggregate value of rural assets of $ 50,000 billion, 37 per cent is concentrated in the hands of 5 per cent of the rural rich.

unemployed with job opportunities. Here again corrective action has to be taken also on the supply side. The educational system at all levels in these countries is turning out unemployables. Plan to reinforce the quantitative unilinear educational expansion of the sixties by work oriented, diversified, vocationalised learning experience, institutional and non-institutional, are now being developed. They must be put into operation speedily because our educational houses are already on fire.

Our third priority is to increase and diversify our agricultural production and mining and manufacturing activities particularly in the backward region and districts. The increased production of cereals and what are called agricultural cash crops call for continuous local application of science to our seed varieties, soils, water use and management, the increase in the production and distribution of fertilisers and pesticides and the development of roads, transport along side of meeting the second generation problem of storage, regulated markets etc. all within the frame of a reformed agrarian structure. Similarly in manufactures, large, medium, small and cottage—the main thrust will be in the larger Asian countries, the key industries of iron and steel, power and fuel, chemicals and pharmaceuticals along side of the new pattern of productions which will manufacture certain non-essential goods for exports and the wage goods for consumption by the poor majority of the country. In this production push, we are planning to pay special attention to those areas of our countries which have been left behind in the race for development. The so called green revolution has touched only 20 per cent of our villages and all our industrial clusters centre around the major cities. The development of the backward regions involves derating resources to the agricultural potential of these districts and attracting manufacturing centres to those areas. This in turn calls for rather heavy and sustained integrated investment in their infrastructural facilities, roads, railways, water supply, electric energy and cultural amenities.

I will close with reference to an intangible priority - and that is the participation of the people in the whole decision making process involved in development. So much of our development planning in Asia - both in Plan formulation and execution - is elitist and is centralised. We have had to start this way, for we have had no model in human history to call upon to guide us in our innovative attempt to build a socialist democracy on a mass base of poverty and illiteracy. But we are now engaged in the exercise of decentralising the processes. Plans are emanating from the districts - the small clusters of villages and towns - which feed into and feed back the next planning layer - the State or the province and on to the National level. A much more difficult task that we are attempting is similarly to ensure that the people who formulate the local or district plans are also responsible for their execution. Here we face not only the usual problems of traditions of distrust, love of power and the road blocks of corruption. What we have found is that these constraints are to be found at every level. It is not simply that the Central or State level is bureaucratic and open to corruption. Such characteristics are to be found at the district and village level, when power is transferred to them. It looks as if it is not only power which corrupts man; equally man seems to corrupt power. Hence within this task of building a participative social democratic structure, our major priority is to humanise the entire development process and return to and recapture the values of service, integrity and selflessness.

SEMINAR FOR RESEARCH SUPERVISORS AND GUIDES IN ECONOMICS RESEARCH METHODOLOGY — AN ASSESSMENT

By

DR. T. K. METI

Introduction :

The Seminar for Research Supervisors and Guides of Economics Research Scholars held at the Karnatak University from 20th May to 2nd June 1973, was organised by the Madras Institute of Development studies with the financial assistance of the Indian Council of Social Science Research. The Seminar had its venue on the beautiful campus of the Karnatak University, Dharwar-3. This Seminar was organised by the Department of Economics, Karnatak University, Dharwar. Dr. A. S. Adke, Vice-Chancellor of the Karnatak University inaugurated the Seminar and made very practical suggestions to the Research Guides and Supervisors in his inaugural address. The Seminar was subsequently conducted under the Directorship of Dr. T. K. Meti. It is worth mentioning that the staff of the Department of Economics, one and all extended sincere co-operation to make the Seminar a grand success.

The Seminar lasted for a period of about two weeks and was chalked out in such a way that the paper-reading and discussion were conducted in the morning session of each day and the lecture-discussion of the Resource Personnel was taken up in the afternoon session. The participants of the Seminar discussed the papers submitted by Dr. T. N. Krishnan on ('Methodological Curriculam' from 21st May to 26th May, 1973. In the second week from 28th May to 2nd June, 1973, the papers written by Dr. Gautam Mathur and Dr. V. Shanmugasundaram on 'Gaps in Current Research and Developing New Areas of Knowledge in Economics' were taken up for discussion. From 31st May to 1st June, 1973 discussion was concentrated on Dr. Anantha Raman's paper entitled "The Problems and Means of Assistance Needed by Supervisors and Guides". On 2nd June, 1973 The concluding session took place between 9.00 a.m and 11.00 a.m. Afterwards the valedictory address was given by Dr. K. R. Nanekar, Professor and Head of the Department of Economics, Nagpur University and the function was presided over by Sri S. S. Wodeyar, Registrar, Karnatak University, Dharwar. Professor Y. L. Inamdar, Department of Economics, Karnatak University, Dharwar proposed a Vote of Thanks.

The participants of the Seminar were invited from 14 Universities in South India including those of the Nagpur University. The University of Mysore, Bangalore University and Annamalai University failed to send their representatives.

Discussion :

During the first week a topic on "Some Aspects of Organising a Course on Research Methodology" was taken up for discussion. This topic was broadly divided into 4 aspects :

1. The need for organising a course on Research Methodology either as pre Ph.D. Programme after M.A. or as a part-time course along with M.A.

2. The subject contents of such a course and its duration.
3. Details of topics that fall under the various subjects in the syllabi of the course and
4. Organisational aspects of such a course.

There was a general consensus of the participants, in the light of the regulations pertaining to Ph.D. programme in various South Indian Universities, regarding the importance of a full time course in Research Methodology so as to enable the research scholars to equip themselves with knowledge and various problems of methodology in economics and also the basic mathematical and statistical techniques or applied aspects of economics.

It was agreed then that such a course should broadly consist of two parts; Part I dealing with axiomatic and scientific theories — scientific methods and inter disciplinary approach, and Part II consisting of basic mathematical and statistical tools of economic analysis. The syllabus was also discussed in its broad outlines and the tentative topics under Part I and Part II were spelt out. It was also pointed out that in view of the small number of fresh registration for Ph.D each year it would not be possibly economical for each university to organise the Research Methodology course every year. Hence it was proposed to organise it at the University Centre, on a rotation basis, which has the resources both in terms of teaching staff and equipments. Bearing in mind the need for intensive training of Research Scholars, (a) it was considered desirable to register admissions between 1 to 5 students selecting 3 to 4 students from each University amounting to approximately 56 students for all the 14 South Indian Universities. (b) selection of the candidates should be on the basis of the recommendations from the Chairmen of the Economics Departments of the respective Universities; (c) assistance from the existing staff of the Department of particular University conducting course should be largely relied on and an honorarium be paid to them, (d) distinguished teachers from various Universities should be invited to deliver lectures intheir respective fields for the course and they should be adequately remunerated including the Director of the course; (e) each selected student should be given scholarship of Rs. 300/- monthly for the entire year and teacher - candidate be paid remuneration eqvivelent to the salary they draw from the present institution; and (f) after a successful completion of the course the students should be awarded a certificate or diploma in Research Methodology.

There was a difference of opinion about whether such a course should be made compulsory for all candidates who work for Ph.D or should be essentially voluntary. In case it is voluntary the question whether a pre-Ph.D programme as obtaining in some Universities like Andhra and Osmania should be introduced in other Universities also was discussed. The financial commitment to such a programme has been estimated at roughly Rs. 5,00,000/- and it is desired that either the University Grants Commission or Indian Council of Social Science Research or both of them should meet the same. The details of expenditure under the various heads have been estimated as below.

(1) Scholarship amount to 50 students at monthly rate of Rs. 300/- for 10 months.	Rs. 1,50,000
(2) Remuneration of the Director of the Centre and of Research Personnel.	Rs. 3,00,000
(3) Office establishment	Rs. 10,000
(4) Library equipment etc.	Rs. 25,000
(5) Miscellaneous	Rs. 15,000
	Rs. 5,00,000

During the first week, resource personnel like Prof. (Miss) K.R. Ranadive of Bombay University and Dr. K. N. Raj of the Centre for Development Studies, Trivandrum joined the discussion.

Prof. (Miss) Ranadive stressed that the research methodology course should try to define the theory and to test it on the basis of the realities. In brief, construction of economic knowledge and its validity for practical life has to be approached through logical and scientific methods and techniques of analysis. Dr. K. N. Raj, also expressed his ideas on Research Methodology in the same way as Prof. (Miss) Ranadive opined. He stressed the importance of identification of a problem and the relationship between students and the guides and the proper scheme of Research Methodology. Prof. (Miss) Ranadive pointed out areas of Research where future courses of action are hidden. Such areas of research include :

(a) Economics of poverty.

(b) Growth with Social justice.

(c) "Beyond Economics".

Dr. K. N. Raj pointed out certain general issues that are to be taken into consideration if the research has to be conducted in a fruitful manner. They are :

(1) Good theory should be based on definite assumptions so that limitations of theory should be understood. Courses in exercises of theories should be introduced in the syllabus for Research Methodology.

(2) There is a necessity for healthy assessment of data and records.

(3) While undertaking the surveys reference should be given to the case tudies as compared to the sample surveys.

(4) The importance of non-economic ctors in economic analysis is yet to e highlighted in a much more meaningful manner. For instance, the future researc should highlight the role of power i economic analysis, the complex of grou interests and study of organisations anc institutions.

Dr. Raj referred to the matter of gaps in the present research and pointed out some of them particularly, gap of research in the field of grain loss and others.

When the participants of the Seminar discussed the paper of Dr. Krishnan they also dwelt on these and various aspects. In brief, the ideas of the participants and of the Resource Personnel are similar in content, nature and norm of the subject in question.

In the second week, the discussion was concentrated on the papers submitted by Dr. Gautam Mathur, Dr. V. Shanmuga Sundaram and Dr. Ananta Raman. The first two papers related to the gaps in the current research and developing new areas of knowledge in Economics. Dr. Ananta Raman's paper was on the problems of assistance needed by the research supervisors and the guides. During this week the resource personnel like Prof. Subramaniam Swamy and Dr. S. K. Goyal took part. Dr. Subramaniam Swamy dwelt at a great length on the methodological gaps in framing the Five Year Plans of India especially the gaps of research efforts in finalising the approach paper to the Fifth Year Plan by the Planning Commission, Government of India. He also mentioned certain gaps in collecting the data by a number of agencies such as Indian Statistical Organisation. R. B. I., etc. He mentioned that there should be uniformity in the concepts used in research surveys, censuses and other studies. Referring to the approach paper to the Fifth Five Year Plan of India, he stressed that the economists should try to impress the bureaucracy to accept their considered views and approaches. Dr. Goyal, in his lecture,

classified the types of research between the research projects and the studies for writing Ph.D dissertation. He pointed out that there was a great potentiality for research in the fields of Corporate finance, measurement of concentration of power, foreign capital flows and the role of foreign assistance.

Again he stressed that there was a good deal of possibility in doing research on the participation of women in economic activities. He directed his analysis to support the observation that there happened to be a credibility gap between theories and executive policies. He maintained that such deviation would refute the sound expectations of the theories and policies. This sort of deviation. he observed, pulls down the image of the Government in the eyes of the public as well as impartial on-lookers.

Dr. Nagarajan presented a paper of Dr. Shanmuga Sundaram. Since a research gap exists in conceptualising or in forming hypotheses, proper care should be taken in the beginning so as to avoid defective and unsound research afterwards. The other areas where there is a gap, were pointed out to be those of economics of labour and business management. There was a consensus of opinion that the inter-disciplinary approach was inevitatable in any research that would be forthcoming. Dr. Mathur's paper pointed towards a good deal of scope of research in 'H' sector. However all the participants arrived at some uniform conclusions regarding new fields of research relevant to a developing economy like India. The conclusions are: (1) How savings are formed and utilised needs more investigation. (2) Why the rate of savings has tended to decline in recent years. The concept of savings vis-a-vis national income has to be properly defined and used consistently throughout. (3) The equity-debt ratio of industries is to be ascertained, (4) The role of non-banking financial intermediaries in industrial development and their role in monetary policy formulation and implementation has to be studied. (5) Testing the hypothesis as licensing system does, go contrary to original objective by locating and strengthening monopolies is necessary. (6) Decentralisation of economic discussions is emphasized. In the end, Professor Subramaniam Swamy urged that in the place of very sophisticated models, the planners should go in for simpler models more appropriate in the Indian context with insufficiency of data.

While discussing Dr. Ananta Raman's paper on problem of assistance to the guides and the guided, some useful conclusions have been arrived at. The relationship between the guide and the guided, it is stressed, depends on the research competence of the guide and confidence of the students in the guide. In other words, to establish good relationship between the guide and the students every effort should be made to provide physical comforts and financial incentives for the students. The guides should make themselves available to the students for frequent consultation without committing themselves to too many assignments which bring more monetary rewards and social contents. As an aid to the guides and the students, the participants came to the conclusion that there was a necessity for a well developed documentation centre which should be open to all social scientists. It is a most happy coincidence that Dr. Malcolm Adiseshiah joined the discussion in this context. The details of documentation centure are as under :

DOCUMENTATION CENTRE

It is recommended, in accordance with the decisions of the I.C.S.S.R. Conference held in 1971 in Madras, Bangalore and Trivandrum and in response to the inter-

disciplinary needs of social scientists including economists, and the consortiums of the Southern Universities, the University of Nagpur and others who wished to join, a social science documentation centre should be established with the help of I.C.S.S.R. to serve the social scientists, particularly research staff and students, in the region on the following basis.

1. Location :—

The location of the Centre will be Indian Statistical Institute Research Training Documentation Centre, Bangalore.

2. Functions :—

(a) Microfilm M. Litt. and Ph. D theses in social sciences of the 15 Universities and make them available to scholars on demand.

(b) Microfilm or procure back numbers of journals and books which are out of print.

(c) Publish abstracts of social science books and periodicals published in India and run a Research News Letter to disseminate research information.

(d) Develop a Library for Social Sciences for these Universities and make available its hostel facilities for stay and study to social scientists from the region.

(e) Promote the establishment in each University of a non-lending text-book Library Centre to meet the needs of social scientists, staff and students.

(f) Plan the development of a Data Bank in the Centre to serve the region.

(g) Carry out other documentation Centre activities.

3. Finance :—

Each University should contribute rupees two thousand annually and the I.C.S.S.R. rupees one lakh annually for the necessary cost of the Centre.

The I.S.S.R., should also meet the non-recurring cost. The possibility of the University Grants Commission financing the Centre should also be explored.

Non-University Research Centres in the region may use the facilities on payment of appropriate fees.

4. Implementation :—

The Karnatak University is requested to take the lead in circulating this proposal to all the Vice-Chancellors concerned and secure the agreement of the Universities and financial aid from the University Grants Commission. The I.C.S.S.R. Regional Centre Hyderabad, is requested to accept this project and help in its development. The M.I.D.S. is requested to help the Karnatak University and negotiate I.S.I. Centre Bangalore and I.C.S.S.R. New Delhi for the realisation of the project.

After discussing all the points of different topics scheduled for the seminar, the concluding session was held on 2nd June, 1973 at 9.00 a.m. In that session, main points of the discussion during the last two weeks were high-lighted and some additional conclusions also have been arrived at: (1) There is necessity of a separate seminar to evolve a scheme of uniformity in the syllabus for M. A. Students, in respect of teaching load of the research guides, working conditions, organisation of the courses on uniform standard, teaching aid, and methods of teaching. (2) Guiding research students and conducting research projects should be treated as part and parcel of academic functions and proportionate reduction in

the teaching load of the research supervisors and guides should be allowed by the concerned Universities. In order to strengthen the research activities, promote the research calibre and produce Ph.D students, every effort should be made in each University to create the adequate facilities of physical and financial infrastructure. (3) Research supervisors and guides shall be given enough financial assistance to make short study-trips to other institutions so as to have the benefit of rich experience which other older centres of research may have in advanced techniques of research. (4) Follow up work is always necessary to have an integrated picture of any research project already completed or to be completed.

Concluding Remarks of the Director of the Seminar.

As the Director of the Seminar, Dr. Meti observed the deliberations of the seminar closely and minutely. It was heartening that the venue of the Seminar was rightly chosen in the summer. In other words, the Karnatak University Campus has been blessed with natural beauty and soothing climate. The authorities of the University, the organisers of the seminar are particularly thankful to the dynamic personality of Dr. Malcolm Adiseshiah for his well thought-out seminar and his ready response for every matter that was corresponded with him by the Director of the seminar.

The participants and the resource personnel felt that the systematic arrangements of the topics of the seminar should have been made in advance so that more fruitful discussions would have been facilitated. Every resource personnel emphatically expressed that he was not given definite topic or subject which he should dwell on in depth. It is therefore, to be pointed out in this connection that for any seminar of this type that is to come up in future should categorise different topics of the main subject of the seminar and every resource personnel should be assigned a definite topic, so that his specialised views could benefit the participants of the seminar. Most of the professors excepting Dr. Ananta Raman, who contributed papers to the seminar were absent. This feature of the Seminar is to be corrected henceforth, because in the absence of the authors the core and spirit of the paper cannot have been shown clearly and convincingly. The seminar participants would be deprived of original ideas of specialists. The Director also concurs with the opinions of participants of the Seminar in the sense that another follow - up seminar on the subject should be arranged next year or in due course to thrash out the uncovered and hastily concluded topics of the seminar. However, it is quite relevant to point out that the seminar fulfilled its objectives during the course of discussions for over the period of two weeks stay on the beautiful campus of the Karnatak University, Dharwar. The author is particularly thankful to the I.C S.S.R. and the Madras Institute of Development Studies for their proper choice of the venue for conducting the Seminar. Special credit should go to Dr. M. S. Adiseshiah who took all the trouble in seeing that this Seminar met with a grand success.

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The activities of the Institute are :

— Studies and action-oriented research in micro-development problems;

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